

Council of the County Palatine of Durham.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

T. EUSTACE HILL, M.B., B.Sc., F.I.C.,

INCLUDING A

Summary of the Annual Reports of the
District Medical Officers of Health,

AND OTHER RECORDS,

FOR THE YEAR

1909.

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THE COUNCIL OF THE COUNTY PALATINE OF DURHAM.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH
COMMITTEE.

GENTLEMEN,

I have pleasure in presenting my Nineteenth Annual Report, and I am glad to say that I have been able to complete it at a considerably earlier period than those for the two previous years.

The same arrangement has been followed as in the immediately preceding report.

The marked decline in the total death-rate and infant mortality-rate, both of which were the lowest ever recorded, is very gratifying, and indicates that the efforts which have been made to improve the public health of the county are bearing fruit.

As I pointed out in my last year's report, the county vital statistics are calculated on a population which is very much underestimated, and in consequence they are really more favourable than they appear to be. The census for 1911 will enable me to revise the estimates of the population and the statistics on which they are based.

I wish to thank your committee and the district sanitary officials for the consideration and assistance I have invariably received.

I am,

Mr. Chairman and Gentlemen,

Your Obedient Servant,

T. EUSTACE HILL.

October, 1910.

THE ADMINISTRATIVE COUNTY.

Area.	The area of the county remains the same as in the previous year. The order constituting the urban district of Chester-le-Street, referred to in my last Annual Report, came into operation on the 1st April, 1909, and the report of the Medical Officer of Health for this new urban district is summarised in this report.
New urban district.	
Number of sanitary districts.	The Administrative County now contains 5 boroughs, 25 urban districts, 14 rural districts, and 2 port sanitary districts.
Application for extension of boundaries - West Hartlepool.	During the year application was made to the Local Government Board by the West Hartlepool County Borough Council for the extension of the boundaries of that town by including a portion of the Hartlepool Rural District. An informal enquiry into the application was subsequently held by one of the Board's Inspectors, with the result that the Board declined to consider further the application.
Application for division of Blaydon U.D.	An enquiry was also held by a Committee of the County Council into an application by the Blaydon Urban District Council for the division of that urban district into two urban districts, the chief grounds for the application being that the district was too unwieldy to be properly supervised by one authority. The Committee's recommendation not to grant the application was subsequently confirmed by the County Council.
Changes in sanitary staff.	I have to record with regret the death of Dr. J. R. Sutherland, who for many years acted as Medical Officer of Health for the Southern Division of the Houghton-le-Spring Rural District. Dr. Park was subsequently appointed Medical Officer of Health for the whole of the Houghton-le-Spring Rural District.

Dr. Duncan and Mr. William Ridley were respectively appointed Medical Officer of Health and Inspector of Nuisances

for the new Chester-le-Street Urban District, otherwise the sanitary staff of the County remained the same as in 1908.

All the district annual reports, with the exception of those for Leadgate Urban District and Hartlepool Rural District, were printed. It is very desirable that all annual health reports should be printed, in order that copies may be available not only for each of the members of the district authority but for the inhabitants of the district who take an interest in sanitary matters. If only two or three type-written copies are made there is little likelihood of the reports receiving proper consideration.

Printing of
annual
reports.

POPULATION.

The estimated population of the Administrative County at the middle of 1909, based on the rate of increase during the last inter-censal period, was 854,800, or an increase of 11,030 when compared with the previous year. The population of the urban districts was estimated at 504,821, and that of the rural districts at 349,979, which excludes three-fourths of the estimated population of the newly created Urban District of Chester-le-Street. According to the estimates of the District Medical Officers of Health who, for the most part, base their figures on the number of occupied houses in their districts, the population of the County is approximately 916,00, and I have not the slightest doubt that the official estimate of the county population is much too low, though it is to be noted that in Felling the population is believed to be over-estimated. I hope, however, that before my next Annual Report is written the figures for the census of 1911 will be available, in which case I shall endeavour to give revised figures as to the vital statistics of the sanitary districts in the county during the past 10 years. At present our figures can only be regarded as approximate, and it is most essential that there should be a census enumeration at least every five years.

Increase of
population.

Estimate
too low.

Coming
census.

Desirability
of quin-
quennial
censuses.

BIRTHS.

The number of births registered was 30,410, a decrease of 887 as compared with the previous year. The birth-rate per

Comparison
with
England
and Wales.

1,000 population was 35·5, which, though 1·5 lower than in 1908, was 9·9 per 1,000 in excess of the rate for England and Wales. It is very satisfactory to note that the birth-rate in the industrial districts maintains its high figure of previous years, and is not to any extent sharing in the very serious decline so noticeable in most parts of England and Wales. In the boroughs of the Administrative County, however, the birth-rate showed a remarkable decrease from 31·2 to 28·1 per 1,000, and I fear the circumstances responsible for the declining birth-rate throughout the country generally are also operating in these districts, as it is also in the residential and more agricultural parts of the County. The highest birth-rates occurred in Spennymoor (40·5), Blaydon (40·3), Seaham Harbour (39·2), and Houghton-le-Spring (39·0), while the rate was as low as 21·21 in Barnard Castle, 21·3 in Stanhope, 23·7 in Weardale Rural District, 24·8 in Stockton Rural District, 25·2 in Durham Borough, 25·8 in Hartlepool Borough, and 26·4 in Stockton Borough.

District
birth-rates.

DEATHS.

Lowest
death-rate
on record.

The total deaths registered in the County were 13,422, equal to a death-rate, calculated on the officially estimated population, of 15·7 per 1,000 population, which is the lowest rate of which I have any record. In the previous year the deaths numbered 14,811, equal to a death-rate of 17·5. The death-rate in the urban districts (15·2) was lower than in the rural districts of the county (16·3), and the death-rate in the 5 non-county boroughs was as low as 14·9. If the county death-rate is calculated on the estimated population of the district Medical Officers of Health 915,354 the total death-rate for 1909 was only 14·6. The marked decline in the total death-rate was largely the result of the diminished mortality among our infant population, the reduction in the number of deaths from diarrhoea being especially marked.

Causes of
low death-
rate.

As to the causes operating in producing the marked reduction in the county death-rate during 1909 the chief undoubtedly was the favourable climatic conditions which prevailed, there being no

prolonged period of hot dry weather during the summer which is always so fatal to our infant population in industrial centres. The marked improvement which has been taking place in the general sanitary condition of the County for some years past is undoubtedly, however, bearing fruit, as is evidenced by the general lowering of the chief mortality-rates whatever the climatic conditions may be. In addition, as Dr. Stobo, the Medical Officer of Health for the Sunderland Rural District, points out:—"Education, "temperance, and a higher standard of living have undoubtedly "played a most important part. But Public Health Administra- "tion in securing for the inhabitants sanitary surroundings, "better housing conditions, and careful supervision of infectious "diseases, must have had some substantial share in this good "work."

The following table compares the death-rates for the county and for its urban and rural districts during the past five years with those for England and Wales:—

Death-
rates,
1905-9.

		1905.	1906.	1907.	198 .	1909.
England and Wales ...	...	15·2	15 4	15·0	14·7	14·5
Administrative County	...	17·4	17·5	17·0	17·5	15·7
Urban Districts	... ..	17·2	17·3	16·7	16·9	15·2
Rural Districts	... ..	17·7	17·9	17·4	18·3	16·3

The county death-rate was very low during the second half of the year, and was only 13·1 during the third quarter. During the first three months of the year, however, it was as high as 17·6. Owing to the terrible pit disaster involving the deaths of 166 men the highest death-rate occurred in the Stanley urban district (23·4 per 1,000), but if the deaths from accidents are deducted the rate was only 15·7 for this district. In no other

Quarterly
death-rates.

Stanley pit
disaster.

District
death-rates.

district in the county did the rate reach 20 per 1,000, the highest recorded being 18·5 in Spennymoor, 17·1 in Bishop Auckland, and 16·6 in Durham City and Leadgate. Among the rural districts the highest death-rates recorded were 16·1 in Easington and 15·7 in Weardale. On the other hand some very low rates were recorded, namely, in Stanhope (10·9), Ryton (12·1), and Tanfield (12·3) among the urban districts, and in the rural districts of Hartlepool (9·3), Stockton (12·4), Sunderland (13·1), and Sedgefield (13·3). It is interesting to note that in 15 urban and 6 rural districts the total death-rate was below 14 per 1,000. In several of the district annual reports it is pointed out that the death-rate for 1909 was the lowest on record.

The direct relation between insanitary areas and a high death-rate is pointed out in Hartlepool Borough and other reports.

Uncertified
deaths.

The proportion of uncertified deaths to total deaths in the county area increased from 3·1 per cent. in 1908 to 3·5 per cent., which is nearly three times as high as the rate for England and Wales (1·3). Altogether 390 deaths were uncertified, the proportion of uncertified deaths being especially high in Darlington, Jarrow, Bishop Auckland, Felling and Spennymoor among the urban districts, and in the rural districts of Auckland, Durham and Easington.

Unqualified
medical
practice.

Of the uncertified deaths 93 were uncertified owing to the attendance of unqualified medical practitioners, 60 of these deaths occurring in Spennymoor where unqualified medical practice has been rife for many years past. The only other districts where uncertified deaths occurred, as the result of unqualified medical practice, were Easington Rural District (17), Bishop Auckland Urban District (8), Durham Rural District (6), and Auckland Rural District (2).

Prevention
of
unqualified
medical
practice.

The General Medical Council having requested the Government to take steps for the appointment of a Royal Commission to enquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons, the Local Government Board during the year issued a circular to medical officers of health asking whether the practice of medicine and surgery by

unqualified persons was assuming larger proportions in their districts, and as to the effects produced by such practice on the public health. It is to be hoped that the action of the General Medical Council will result in the Government taking action not only to prevent medical practice by unqualified persons, which, as I have pointed out in former reports, is undoubtedly a danger to the public health, but will also insist on the certification of all deaths by qualified medical practitioners.

INFANT MORTALITY.

One of the most satisfactory features of the statistics for 1909 is the very marked reduction in the mortality among children under one year of age, the total deaths recorded being 3,792, or nearly 1,000 less than in the previous year when 4,750 deaths occurred. The infant mortality-rate per 1,000 births registered was only 124, which is by far the lowest rate ever recorded in the county. The highest infant mortality-rate occurred in the rural districts (129), the rate in the non-county boroughs being 119, and in the other urban districts 120. As a general rule there is always a very marked increase in the infant mortality during the third and fourth quarters of the year owing to the excessive prevalence of diarrhoeal diseases, but, owing to the cold summer, the year under review was a marked exception, the county infant mortality-rate during the third and fourth quarters being only 117 and 141 respectively as compared with rates of 166 and 196 in the corresponding quarters of the previous year. The highest infant mortality-rates occurred in Spenny-moor (171), Leadgate (163), and Jarrow (148) among the urban districts, and in the rural districts of Easington (153), Chester-le-Street (140), and Sedgefield (139). On the other hand the rate was below 100 in Tow Law, Benfieldside, Barnard Castle, Crook, Shildon, Houghton-le-Spring, and Whickham among the urban districts, and in the Hartlepool and Weardale rural districts. The rate for England and Wales was, however, considerably below the county rate, being only 109, which is also the lowest

Lowest
infant
mortality-
rate
on record.

District
infant
mortality-
rates.

Causes of
decline in
infant
mortality-
rate.

ever recorded. While there is no doubt that the climatic conditions during 1909 were generally favourable to infant life, and were partly responsible for the low infant mortality-rate throughout the country, there has been for some years past evidence of a satisfactory decline in our infant death-rate, owing no doubt partly to improved sanitary circumstances but also to no small extent to the recognition by the working-class population of the importance of domestic cleanliness in its widest sense. This has been brought about partly by education in our elementary schools, partly by the public attention given to the matter for some years past and, where they have been employed, by the work of Lady Health Visitors.

In the following table is given the infant mortality-rate for the county and for the districts in the county where the Notification of Births Act has been adopted, and Health Visitors have been working during 1909, and it is a remarkable fact that practically in every district the infant mortality during that year was the lowest on record :—

DEATHS OF INFANTS UNDER ONE YEAR PER 1,000 BIRTHS IN DISTRICTS
WHERE THE NOTIFICATION OF BIRTHS ACT WAS IN FORCE DURING 1909.

Notification of Births Act Administered by	District.	1892- 1896.	1897- 1901.	1902- 1906.	1907.	1908.	1909.
Co. Health Visitor ...	*Brandon and Byshottles.	179	196	174	140	191	125
Do. ...	Shildon ...	169	182	175	182	101	96
Do. ...	Southwick-on- Wear.	180	194	178	132	187	126
Do. ...	Stanley ...	(4 yrs.) 194	181	175	177	191	139
Combined District Nurses & Health Visitors.	Whickham	159	160	154	138	127	95
Borough Health Visitors.	†Stockton	161	173	141	115	150	119
Rates for the Administrative County...		162	171	156	136	151	124

NOTE.—* Notification of Births Acts adopted and Health Visitor commenced duties in August, 1909.

† Health Visitor first appointed for Stockton in 1902.

Infant
mortality
and
notification
of Births
Act.

In Stockton, where a Lady Health Visitor has been working for the last seven years, the decline in the infant mortality-rate during that period has been most marked, the decline commencing from the very year of the first appointment of the Health Visitor.

Lady
Health
Visitors.

Whickham
U.D.

Brandon
U.D.

Shildon
U.D.

Southwick
U.D.

Stanley
U.D.

Durham
U.D.

The Medical Officer of Health of Whickham speaks in the highest terms of the excellent work done by the Health Visitors in that district, and the Medical Officers of Health of the four districts in which the County Health Visitors were working during 1909 also speak highly of their work. Thus Dr. Smith, of Brandon, says:—"She has been well received by the people, "and has done very good work. I am sure her influence and "teaching cannot fail to do good. She is well adapted to the "work, and I trust her labours will be conducive to a still further "reduction in the infant mortality-rate." Dr. Fielden, of Shildon, says, in reference to the fact that the infant mortality-rate was the lowest on record:—"The lady Health Visitor has now been "at work in the district for more than twelve months, and I am "fully persuaded that her services have very materially conduced "to this result. I have every reason to think that her labours "have been appreciated, and I know of many persons who have "been most grateful for her advice. I feel sure that a continu- "ance of this and kindred work will have a very beneficial "effect on the child-life of this district." Dr. Carruthers, of Southwick, says:—"The Lady Health Visitor was generally well "received. In seeking for an explanation of the great diminution "of the infantile mortality, the powerful influence of climatic "conditions has not to be overlooked. But while recognising the "fact that the year 1909 was a favourable one in this respect, I "think the credit of reducing so markedly the infantile mortality "must, to a considerable extent, be attributed to the operation of "the Notification of Births Acts and to the manner in which the "Lady Health Visitor performed her duties. The Act has not "been in force in the district long enough to enable one to judge "with any degree of certainty regarding the results, but they are "manifestly, so far, very encouraging"; and Dr. Benson, of Stanley, says:—"The Health Visitor is especially useful in "showing the mothers how to diet the children when natural food "is not available."

The Medical Officer of Health of Durham City in referring to the work of the Lady Health Visitor appointed by a Voluntary

Committee, says :—“ I have no doubt whatever that much good “ has already resulted.”

The Medical Officer of Health of the Sunderland Rural District says, in his report:—“ It is to be remembered that in- “ sanitary conditions are sometimes inside, as well as outside “ the house, and are frequently due to the careless and dirty “ habits of the people,” and it is in the remedying of such condi- tions and habits, and in the giving of instructions as to the feeding and management of infants that the services of Health Visitors are especially valuable. In several of the health reports (Hebburn, Spennymoor, and the Chester-le-Street Rural District), the appoint- ment of Health Visitors is recommended, and in the report for Seaham Harbour the valuable services of the District Nurse are referred to. Dr. Taylor (Chester-le-Street Rural District), says :—“ I consider that the time has quite arrived when your “ Council should seriously consider the desirability of appointing “ one or more ladies as Health Visitors. Surely some attempt “ should be made to check, or attempt to check, the huge “ holocaust of infants which annually takes place in some of your “ parishes. Take for example Pelton, where 18 per cent. of “ children die before reaching the end of their first year ; Urpeth, “ 22 per cent. ; Witton Gilbert, 16 per cent. ; and Walldridge, 17 “ per cent. ; and this in a year which is one of the very lowest “ years of Infantile Mortality.” On the other hand the Medical Officer of Health of Sedgefield Rural District expresses a prefer- ence for District Nurses rather than for Health Visitors.

Appoint-
ment
of Health
Visitors
recom-
mended.

It is satisfactory to note that in those districts where the Notification of Births Act has been adopted it has worked generally smoothly and without friction, and in the four districts where the County Health Visitors have been appointed there were during 1909 only 60 births out of the 1624 which were not notified. Of the notified births 65 per cent. were reported by medical practitioners, 16 per cent. by midwives, and 19 per cent. by other persons.

Smooth
working
of
Notification
of Births
Act.

Illegitimacy
and infant
mortality.

In some of the district health reports attention is called to the high death rate among illegitimate children. Thus in the Windy Nook area of the Felling Urban District, of the four illegitimate children born, all died before they completed their first year of life, while in the whole of that district the infant mortality rate among illegitimate children was 333 per 1,000 births as compared with 117 among all children born in the district. In the report for Chester-le-Street Rural District, it is pointed out that the illegitimate infant mortality rate was more than double the rate among children born in wedlock.

ZYMOTIC DISEASES.

Low
zymotic
death-rate.

Comparison
with
England
and Wales.

The seven principal zymotic diseases, the deaths from which are included under this heading, are small-pox, scarlet fever, diphtheria and membranous croup, fevers (enteric, continued, typhus, &c.), measles, whooping cough, and diarrhœa, and they were responsible during 1909 for 1383 deaths, equal to a death rate of 1·61 per 1,000 population. This is one of the lowest zymotic death rates ever registered in the county. In the previous year these deaths totalled 2278, representing a death rate of 2·69 per 1,000. The rate for England and Wales for 1909 was also very low, viz., 1·12 per 1,000 population.

As has been many times previously noted the zymotic death rate in the non-county boroughs (1·15) is much lower than the rate for the county as a whole. In the other urban districts the rate (1·64) closely approximated to the rate in the rural districts.

There was no marked variation in the county zymotic death rate during the different quarters of the year, the rate varying from 1·45 in the quarter ending June to 1·88 in the third quarter. In the previous year the variation was much greater, viz., from 1·5 to 3·8.

District
death-rates.

As regards the individual districts it is interesting to note that for the second year in succession the zymotic diseases death rate in Stanhope was nil, whilst there were also no deaths from

these diseases in the Hartlepool Rural District. On the other hand the rate was as high as 2·71 in Spennymoor, 2·14 in Seaham Harbour, and 2·4 in the Easington, and 2·04 in the Stockton Rural Districts. In every other district in the county, however, the rate was below 2·0 per 1,000.

In the following table the chief vital statistics of the Administrative County during 1909, and of its urban and rural districts are compared with those of England and Wales:—

Chief vital statistics.

1909.	Total Urban Districts.	Rural Districts.	Administrative County.	England and Wales.
Birth-rate	33·2	38·8	35·5	25·6
Death-rate	15·2	16·3	15·7	14·5
Zymotic Death-rate ...	1·47	1·82	1·61	1·12
Infant Mortality-rate ...	120	129	124	109
Small-pox	Nil.	Nil.	Nil.	0·00
Scarlet Fever	0·09	0·08	0·09	0·09
Diphtheria and Membrancus Croup	0·13	0·23	0·17	0·14
“Fever” (Enteric and Continued)	0·09	0·16	0·12	0·06
Measles	0·40	0·34	0·37	0·35
Whooping Cough	0·21	0·30	0·25	0·20
Diarrhœa	0·52	0·68	0·59	0·28

It will be noted that not only is the birth rate, but also nearly all the mortality-rates are considerably higher in the rural than in the urban districts of the county. This, as will be seen from Table C at the end of the report, is largely the result of the

Comparison of urban and rural statistics.

more favourable statistics in the five non-county boroughs, which closely approximate to the figures for England and Wales in most particulars.

If the statistics for the five boroughs are excluded, it will be noted that the birth rate for the rest of the county considerably exceeds 37 per 1000, and that in regard to the chief mortality statistics the rates for the other urban districts and the rural districts are very similar.

SMALL-POX.

One case of small-pox was reported in the county, from the River Tyne Port, in August, but not a single case was notified during the year from any of the urban or rural districts.

Vaccination.

The proportion of unvaccinated children in the county is rapidly increasing, partly owing to the fact that exemption certificates can now so readily be obtained, and partly because the county has for so long a period enjoyed comparative immunity from small-pox. In my last annual report I referred at some length to the danger of neglecting vaccination, and several of the District Medical Officers of Health in their reports for 1909 express themselves strongly on this matter; thus Dr. Vann of Durham City says:—"I cannot, however, but view with misgiving "the growing tendency to neglect vaccination in infancy. Sooner "or later nemesis will overtake us, and we will have to pay a big "price for our legislative laxity in this respect in disease and "mortality."

Dr. Andrew Smith, of Whickham, points out that "There is "growing up a considerable increase of population unprotected "against small-pox, which is preparing the way for a probably "not far distant epidemic of this formidable and loathsome "disease," while the Medical Officers of Health of the Sedgefield and Weardale (Stanhope) rural districts utter a similar warning.

SCARLET FEVER.

This disease was both more prevalent and slightly more fatal than in the previous year, 3,737 cases and 80 deaths occurring, as compared with 2,567 cases and 62 deaths in 1908.

Increased
prevalence

During the first eight months of the year there was little variation in the number of monthly notifications, but in the subsequent months of the year there was a considerable increase in the number of cases and in the death rate.

The death-rate for the county (0·09) was exactly the same as that for England and Wales, and the rate was practically also the same in the urban as in the rural districts of the county.

The disease was especially prevalent in Brandon, Felling, Stanley, Blaydon, Tanfield, and in portions of the Rural Districts of Auckland, Chester-le-Street, and Weardale.

District
incidence.

In several of the reports the impossibility of properly isolating cases of scarlet fever and other infectious diseases in the majority of the dwellings in this county is mentioned and also the advantage of hospital accommodation for this disease.

Value of
isolation
hospitals.

At Wolsingham in the Weardale Rural District there was no hospital accommodation for the cases which occurred, and the disease became in consequence seriously prevalent.

In the opinion of many of the Medical Officers of Health the continued prevalence of this disease is due to the occurrence of mild unrecognised cases, and to the want of care on the part of parents in isolating children suffering from the disease; thus Dr. Taylor, of Chester-le-Street Rural District says:—
“The ‘striking’ distance of scarlet fever is not great apparently,
“and if the visiting between susceptible children and infectious
“houses could be prevented, I am certain scarlet fever would
“very quickly be reduced, and very much reduced. The
“exposure of infectious children, could I am sure, be prevented
“to a very great extent, but in the meantime whatever good
“which would arise from that source of infection being stopped

Causes of
spread.

“is more than balanced by the opposite taking place, which at present is daily, or at least whenever the neighbouring mothers desire to spend an hour or more gossiping.”

In the report for the Hartlepool Rural District it is stated that seven cases of scarlet fever occurred in one family in Hart, and the Medical Officer of Health states that in making a house to house visitation where an extensive epidemic of scarlet fever occurred he found nine cases in various stages of convalescence which had apparently not been notified, and the children had been running about without any precautions whatever. In this district no cases of infectious diseases were isolated in the hospital during the year.

DIPHTHERIA AND MEMBRANOUS CROUP.

Reduced
case-
mortality.

Although there was a slight increase in the number of notified cases of these diseases it is satisfactory to note that there was a decline in the number of deaths, as is shown in the following table :—

Diphtheria and Membranous Croup.	ADMINISTRATIVE COUNTY.				
	1905.	1906.	1907.	1908.	1909.
Cases notified	1547	1298	1108	1146	1152
Deaths registered	210	168	169	152	149
Death-rate per 1,000 population	0·25	0·20	0·20	0·18	0·17

Comparison
with
England
and Wales.

Compared with 1908, however, there was a considerable fall in the mortality in the urban districts, and an almost corresponding rise in that of the rural districts, and as will be seen from a preceding table the rate for the urban districts of the county is slightly lower than that for England and Wales (0·14).

In the individual sanitary districts the disease was somewhat prevalent in Stockton, Ryton, Shildon, Stanley, Tanfield, Barnard Castle, and Whickham, and in the rural districts of Durham, Easington, Lanchester, and South Shields.

District
incidence.

As to the cause of diphtheria, the opinions of the district Medical Officers of Health vary, thus in some cases (Barnard Castle, Durham, and Easington Rural Districts) insanitary conditions were noted in connection with many of the cases. In Blaydon and in the Lanchester Rural District cases appeared to have been associated with disturbance of the soil, but in most of the reports the opinion is expressed that the disease was spread for the most part by direct infection, often by means of mild unrecognised cases. The presence of such cases at schools (the infecting child often apparently being quite healthy) is mentioned in several of the reports as a cause of the spread of the disease, and the need for recognition by teachers of the possible disease spreading powers of children who have had sore throat, or who have recovered from an attack of diphtheria, cannot be too strongly emphasized. Dr. Smith, of Ryton, on this matter, says:—
 “As showing the manner in which the disease may be spread, a
 “boy was found suffering from diphtheritic paralysis, who had
 “never been absent from school, and who had some weeks
 “previously suffered from sore throat, which had undoubtedly
 “been an unrecognised diphtheria of a mild type.”

Causes of
diphtheria
outbreaks.

Dr. Smith, of Whickham, in his annual report refers to a small epidemic of diphtheria in the Whickham Urban District, which was traced to what might be called a “carrier” case, and the following extract from his report is particularly interesting:—

“The cases were fairly distributed over the year, the only
 “month in which no cases were notified was August. With one
 “exception it never attained epidemic prevalence, and it was but
 “rarely that the origin of any case could be ascertained.

“The exception was a small epidemic of 11 cases in June
 “and July, at Whickham, which was of a peculiar if not unique
 “character.

“ At the end of June one case occurred, and at the beginning
 “ of July a series of others in rapid succession, living widely apart
 “ in the village. It was noted that they were all of the same age,
 “ and on enquiry I found they were all attending the same class in
 “ the infant school. I visited the school and found that they were
 “ all even in this room usually close together; as others came in
 “ the area widened, but still they were all from the same class room.
 “ It was obvious that they were all coming from some source of
 “ infection in the school. At this time the school was within a
 “ week of closure for the summer holidays. It was too great a
 “ task to get swabs taken from all the children, because we have no
 “ power to do so without consent of parents, and the time was
 “ too short to get this and carry out the work. I, however,
 “ suspected a probable origin in a child that I had attended five
 “ months previously for laryngeal diphtheria, and who had had
 “ a chronic discharge from the ear since it was two years old.
 “ This child was isolated until throat swabs were negative about
 “ the sixth week, and it did not return to school till several weeks
 “ later, as it continued under treatment for ear discharge.
 “ Treatment failing, it was sent to the Newcastle Infirmary with
 “ a view to operation, but it was decided to continue local
 “ treatment—antiseptic syringing and eardrops. This had been
 “ persistently carried out, but still discharge continued. My
 “ suspicion fell on this discharge, and I sent a swab from the ear
 “ for bacteriological examination and it proved positive, diphtheria
 “ bacilli were present, and that in spite of the long continuance
 “ of antiseptic treatment.

“ Another swab taken in the same way after all antiseptic
 “ treatment was stopped for three days was again returned
 “ positive, as was also a swab from the throat. A consultation
 “ with a throat and ear specialist was then held, and on his advice
 “ the case was admitted to the isolation hospital and there
 “ operated on for radical cure of chronic otitis media, enlarged
 “ tonsils and adenoids being removed at the same time. The
 “ removed tonsils, adenoids, a swab from the antrum and a swab

“from the tympanum were all submitted to bacteriological examination. All gave a negative result except that from the tympanum which contained the discharge as it was coming from the middle ear.

“It was clear therefore that the middle ear had been acting as an incubating chamber for the diphtheria bacilli and that these were being constantly passed with the discharge from the ear and occasionally also down the eustachian tube to the throat and this had apparently been going on for six months which was the interval between the attack of diphtheria and the operation.

“The school was closed for the usual summer holidays in the same week as this child was again isolated and no more cases occurred, indeed there were no cases at all throughout the whole district during the next month, when all the schools were closed; after that isolated cases occurred as usual but without any obvious connection with any of the schools.”

There is no doubt that diphtheria is often spread by the exposure of susceptible children in schools to infection from unrecognised or “carrier” cases of the disease, liability to the spread of infection in such cases being increased where the school is overcrowded and ill-ventilated.

School
attendance
and
diphtheria.

In a large number of sanitary districts in the county diphtheria antitoxin is now supplied by the sanitary authorities to medical practitioners free of charge, and there is not the slightest doubt, as is pointed out by several of the Medical Officers of Health that the proper use of this valuable remedy has very markedly decreased the mortality from diphtheria. In fact the evidence is very strong that the mortality from this disease would be reduced to the vanishing point if antitoxin were at once administered in all cases of diphtheria or suspected diphtheria.

Anti-toxin
supplied
free
by sanitary
authorities.

The value of a bacteriological examination in connection with the diagnosis of diphtheria is urged in several of the district

Value of
bacteriolo-
gical exami-
nations.

reports, and in several instances regret is expressed that more use is not made of the facilities granted by the County Council to medical practitioners for such examinations.

It is also very desirable that the freedom from infection of a child who has suffered from diphtheria should be ascertained by a bacteriological examination of swabs taken from the throat.

Hospital
accommo-
dation.

The value of early isolation in a hospital of diphtheria cases is indicated in several of the reports, and in some districts additional hospital accommodation for this purpose is urged.

TYPHUS FEVER.

No cases of this disease were notified from the administrative county during 1909.

ENTERIC FEVER.

Decreased
prevalence
and
mortality.

It will be seen from the following tables that there was a marked decline both in the prevalence of and deaths from this disease during 1909, but in spite of this satisfactory result the fact remains that the death-rate from enteric fever was exactly twice as high for the County of Durham as for England and Wales. As in the previous year the mortality-rate in the rural districts (0·16) was nearly double that of the urban districts (0·09).

Monthly
incidence
of cases, &c.

The following table gives particulars of the incidence of, and mortality from, enteric fever during each month of the year, in the Administrative County of Durham:—

					Enteric Fever.	
1909.			No. of Cases.	No. of Deaths.	Case Mortality per cent.	Death-rate per 1,000 Population per annum.
January	...	...	49	16	32·6	0·22
February	...	...	56	9	16·0	0·13
March	...	...	45	10	22·2	0·13
April	...	...	48	8	16·6	0·11
May	...	...	52	12	23·0	0·16
June	...	...	46	5	10·8	0·07
July	...	...	30	3	10·0	0·04
August	...	...	43	5	11·6	0·06
September	...	...	92	10	10·8	0·14
October	...	...	98	7	7·1	0·09
November	...	...	67	13	19·4	0·18
December	...	...	42	8	19·0	0·11
1909			668	106	15·8	0·12

The next table gives the total number of cases of enteric fever, the total deaths, the case-mortality, and the death-rate during each of the last five years in the Administrative County of Durham :—

Year.			No. of Cases.	No. of Deaths.	Case- Mortality per cent.	Death-rate per 1,000 Population.
1905	...	...	1,014	158	15·5	0·19
1906	...	...	1,090	187	17·1	0·22
1907	...	...	449	85	18·9	0·10
1908	...	...	1,048	157	14·9	0·18
1909	...	...	668	106	15·8	0·12

District
incidence,
and causes.

In no district during 1909 was enteric fever seriously epidemic, but its incidence was marked particularly in the Easington Rural District and to a less extent in the rural districts of Auckland and Sunderland. In the Easington Rural District it is pointed out that several cases resulted from the eating of watercress taken from polluted streams, while other cases in the township of Stationtown were associated with the disturbance of polluted soil during the making and channelling of a street. In the Sunderland Rural District the disease was especially prevalent in the colliery village of Ryhope where the disease may be said to be almost endemic owing, in the opinion of the district Medical Officer of Health, to the large number of insanitary midden privies and the deplorable condition of the streets and yards. In reference to the prevalence of this disease in Ryhope Dr. Stobo says:—"I should like to draw your Council's
"attention to the fact that typhoid fever is an infectious disease,
"and that in every house without a water closet and without
"accommodation for efficient isolation, the case should be
"removed to hospital. He is not only a danger to the other
"inmates of the house, but almost as great a danger to his
"immediate neighbours." In the Borough of Stockton cases of this disease were attributed to the eating of infected shell-fish and to infected material being carried by dust and flies, and posters were issued pointing out the danger of eating uncooked mussels or other shell-fish. Cases occurred in Whickham and in the Chester-le-Street Rural District which were also attributed to the eating of shell-fish. In Blaydon defective drainage is mentioned as the cause of a number of cases which occurred, but in the majority of cases the disease was attributed to such insanitary conditions as foul ashpit privies and polluted subsoil about dwellings, the spread of the disease being assisted by flies and by infected dust during the process of scavenging or by high winds. There was no direct evidence that either the milk or water supplies were responsible for any outbreaks of enteric fever in the County during 1909.

The highest death-rates from enteric fever occurred in the Easington, Auckland and Sunderland Rural Districts, and in the urban districts of Bishop Auckland, Hebburn, and Seaham Harbour. The Medical Officer of Health of Hartlepool points out that in that town, where water closets are universal, not a single case of enteric fever occurred during the whole year, and I have not the slightest doubt that if the water carriage system was adopted throughout the county of Durham, our death-rate from enteric fever, which exceeds that of any other county in the country, would be reduced below the low rate now obtaining throughout the country generally.

Highest
district
death-rates.

CONTINUED FEVER.

The cases of this disease declined from 38 in 1908 to 24, the proportional reduction being practically the same as that of enteric fever, and as I have stated in previous reports the majority of the cases of continued fever are undoubtedly mild cases of enteric fever. Thirteen, or more than half of the total cases were reported from the Easington Rural District. Only one of the cases proved fatal, the death occurring in the Easington Rural District.

Decreased
prevalence.

PUERPERAL FEVER.

Of the 32 cases notified of this disease, 15 occurred during the first quarter. The deaths from puerperal septic affections numbered 32, as compared with 42 in 1908, and seven of these deaths occurred in the Chester-le-Street Rural District. The proportion of such deaths was also very high in this district in 1908. Five cases which occurred in the practices of certified midwives were specially investigated, and the necessary pre-cautionary measures adopted, the midwives concerned being temporarily suspended from practice. One case of puerperal fever which occurred in Stockton, appeared to have been directly the result of insanitary surroundings, for the Medical Officer of Health reported of the patient that "her invironment is such as "to leave no surprise that puerperal fever should develop," and he adds, "the dwelling in which the birth occurred was

Midwives
and pre-
cautionary
measures.

“horribly insanitary, and it was subsequently closed by order of the Council upon my report as being unfit for human habitation.”

ERYSIPELAS.

This disease was slightly more prevalent, 722 cases being notified as compared with 624 in 1908. The deaths from the disease also increased from 16 to 21. In none of the reports is any special reference made to the causes of this disease.

MEASLES.

Comparison
with
England
and Wales.

This disease was much more fatal especially in the urban districts 324 deaths, of which 204 were in the urban districts, occurring as compared with 236 in 1908. The death rate (0·37 per 1,000 population) only, however, very slightly exceeded the rate for England and Wales, the death rate in the rural districts being in fact below it.

Distribu-
tion.

The disease was especially fatal in Stockton, where it was also epidemic in 1908, and in Felling, Hebburn, Hetton, Seaham Harbour, Southwick, Spennymoor and in the Rural Districts of Easington, Houghton, and Stockton.

Compulsory
notifica-
tion.

In the different quarters of the year the mortality from the disease varied from 0·33 in the last quarter to 0·45 in the second quarter of the year. The Barnard Castle Rural District Council has made measles compulsorily notifiable in their district, and the Barnard Castle Urban District Council have come to a similar decision. In my last annual report I dealt at some length with the question of school closure as a means of preventing the spread of measles and whooping cough, and pointed out that on public health grounds school closure was useless when once the attendance had become materially affected owing to the prevalence of the diseases, and also that it was unnecessary to exclude from school elder children who had had measles even if they were living in houses where cases of measles existed, and it was some satisfaction for me to find that, in an important memorandum on

School
closure.

closure of and exclusion from school signed by the principal Medical Officers of the Local Government Board and Board of Education, my opinions were supported. Thus the memorandum states "School attendance may be greatly lowered during the prevalence of an infectious disease, especially of measles and whooping cough, and school closure may then be desired to avoid a considerable reduction in the average attendance. In such circumstances a large proportion of susceptible children have generally already contracted the disease or been exposed to infection, and the closure of the school commonly does little to prevent further spread of the disease. In large towns, and in the smaller districts in which the majority of children over seven years of age who are attending public elementary schools have had measles, the practice is frequently adopted, when measles breaks out in a household, of excluding from school attendance only those children of the same household who attend the infant school, and those older children of the same household who have not had measles. . . . The above procedure can be recommended as the result of experience in large districts. . . . School closure has probably more frequently taken place on account of epidemics of measles than for any other disease, but as the closure has been commonly deferred until a large proportion of the children are already absent, it has proved useless, in populous districts at least, for the purpose of preventing the spread of the disease."

L.G.B. and
Board of
Education
memor-
andum
re school
closure.

The memorandum recommends that school closure by medical officers of health should only be decided upon after conference with the School Medical Officer, and it also recommends that arrangements should be made for teachers and school attendance officers to at once report cases of infectious disease to the Medical Officer of Health and School Medical Officer.

A conference of Medical Officers of Health and School Medical Officers in this county called by me in the early part of 1910, passed a number of resolutions supporting the principal recommendations contained in the memorandum.

Conference
of M.O's H.
and
S.M.O's.

Deaths and death-rates 1905-9.

In the following table the deaths and death-rates from measles for the last five years are given:—

	ADMINISTRATIVE COUNTY.				
	1905.	1906.	1907.	1908.	1909.
Deaths from Measles	393	138	581	236	324
Death-rate from Measles per } 1,000 Population ... }	0·48	0·16	0·69	0·27	0·37

Schools closed.

During the year 118 departments of 91 schools were temporarily closed on the recommendation of the Medical Officer of Health owing to the prevalence of measles, and one department was closed by me as School Medical Officer for the same reason.

WHOOPING COUGH.

Decreased mortality.

This disease was responsible for 217 deaths equal to a death-rate of 0·25 per 1,000 population. In the previous year the deaths numbered 452 equal to a death-rate of 0·53 per 1,000. The rate in the rural districts (0·30) was considerably higher than in the urban districts (0·21). The rate for England and Wales was only 0·20, which is considerably below the average. The disease was much more prevalent during the first half of 1909 when 141 deaths occurred, only 76 occurring during the last six months of the year.

Distribution.

The mortality was especially high in Darlington, Jarrow, Consett, Hebburn, Stanley, and in the rural districts of Chester-le-Street, South Shields, Stockton and Weardale (St. John's).

School attendance officers and whooping cough.

In his annual report for 1908 the Medical Officer of Health for Whickham drew attention to the fact that children were sometimes pressed to return to school by school attendance officers before they had completely recovered from whooping cough. The matter was referred by the County Education Committee to the Blaydon District Education Sub-Committee, who questioned the accuracy of Dr. Smith's statement, but Dr.

Smith replied by reiterating his charges and giving specific instances, and he says in his present report :—“I most emphatically “stand by my statements, and I am prepared to defend them.” The Medical Officers of Health of other districts in the county have also from time to time called attention to this tendency to press children who are suffering from non-notifiable infectious diseases to attend school before they are quite free from infection, and it is to be hoped that the attention which has been drawn to the matter will result in the abolition of this undesirable practice.

Several Medical Officers of Health in their reports refer to the fact that whooping cough and measles cause more deaths than all the other infectious diseases put together, and this fact must be pressed home to parents, teachers and school attendance officers.

Seriousness
of whooping
cough.

Dr. Smith, the Medical Officer of Health for Whickham, refers to “the amazing and I think criminal indifference of the “public towards these diseases,” and Dr. Taylor, of Chester-le-Street, says :—“Too little attention continues to be paid to this “infantile disease. It is much more fatal than generally thought, “and causes many permanent changes in the lungs of the young “victim. All cases of whooping cough should be rigorously “excluded from school, yet the long period of infectiousness is “just the cause which operates against exclusion. Parents care- “less of other children, and school authorities careful of the “‘grant,’ think that a child able to run about, and who may not “appear to ail much, should be at school, forgetting that the “infectious child in the open air is less dangerous to its play- “mates than the same child in school, in close contact with its “fellow scholars.”

Owing to the prevalence of whooping cough eight departments of schools were temporarily closed on the recommendation of the Medical Officer of Health.

Schools
closed.

DIARRHŒA.

This disease was fortunately less fatal than in the previous year, only 506 deaths equal to a mortality of 0·59 per 1,000

Decreased
mortality.

population being recorded, as compared with 1,217 deaths and a death rate of 1·47 in 1908. The county death rate, however, was still more than twice as high as that for England and Wales (0·28). The largest number of deaths occurred during the months of September (111) and August (94), but in 1908 more deaths from diarrhoea occurred during the third quarter than during the whole of 1909. As in previous years, the great majority of deaths during 1909, from diarrhoeal diseases, viz., 405, equal to 80·0 per cent., occurred among infants under one year of age.

Incidence.

The mortality from diarrhoeal diseases was especially high in Blaydon, Spennymoor, Brandon, Hetton, Annfield Plain, and in the rural districts of Auckland, Easington, and Chester-le-Street, and generally speaking, the rate was considerably higher in the so-called rural areas than in the urban districts of the county.

It is interesting to note that the diarrhoeal mortality rate of the five non-county boroughs is very much below the rate for the county as a whole.

Causes.

The causes of diarrhoea have been dealt with at length in my previous annual reports, but it may be mentioned that in Spennymoor, where the mortality is excessively high, the medical officer of health reports that the deaths are almost entirely among bottle-fed children.

Means of reducing mortality.

The Medical Officer of Health of Stockton points out that the highest diarrhoeal mortality occurred in the Victoria ward, where insanitary conditions were most prevalent, and he emphasizes the value of the advice and help given to mothers by the Lady Health Visitor in reducing the diarrhoeal mortality generally.

The Medical Officer of Health for the Sunderland Rural District, urges that pure milk and greater domestic cleanliness on the part of the people will do much to reduce the diarrhoeal mortality.

Many of the district Medical Officers of Health express the opinion that, given insanitary conditions, and pollution of soil and air about dwellings, the dominating factor in any year in the

prevalence of summer diarrhoea is the weather, a hot dry summer always producing a high diarrhoeal death-rate. On the other hand, it is fully recognised that if infants receive proper maternal attention, and if the air, food, and soil are kept free from pollution, the annual sacrifice of infant life from diarrhoeal diseases would be prevented whatever the climatic conditions.

During 1909 the county health visitors made a special enquiry as to the home circumstances of infants dying in their districts from summer diarrhoea. The number of deaths were, however, too small on which to base any definite conclusions, and the enquiry will be continued during subsequent years, but so far it is evident that the deaths chiefly occurred among hand-fed children where the home conditions were not satisfactory.

Health visitors, district nurses, and properly trained midwives are doing much to educate mothers in matters of infant feeding and management, and by the abolition of ashpit privies, provision of healthier houses, and the paving of yards and spaces about dwellings much has been done (and remains to be done) by many sanitary authorities towards reducing the prevalence of diarrhoeal diseases.

It is now recognised that diarrhoea, enteric fever, and probably many other infectious diseases are, to use the alliterative expression quoted by Dr. Smith, of Whickham, spread by the "filthy feet of faecal-feeding flies," and increasing attention must be paid to the prevention of filthy accumulations, and especially stable refuse about dwellings, which it is now known are the chief breeding places of flies.

Flies and
spread of
disease.

INFECTIOUS DISEASE (NOTIFICATION) ACT.

There was a considerable increase in the number of notified cases of infectious disease as compared with 1908 when 5,456 cases were notified, the large number of scarlet fever cases more than accounting for the increase, but there was also a very slight increase in the number of cases of diphtheria and membranous croup, puerperal fever, and erysipelas. On the other hand the cases of enteric fever were 380 less than in 1908. The cases of continued fever also showed a proportional decline.

INFECTIOUS DISEASE (NOTIFICATION) ACT.

Statement of notifiable diseases reported during each month of 1909.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Small-Pox...	...	...	...	...	...	...	...	1	...	...	...	...	1
Scarlet Fever	246	221	292	256	316	288	261	236	412	396	412	401	3737
Diphtheria	129	118	99	80	80	84	79	56	106	87	115	90	1123
Membranous Croup	4	5	3	3	...	...	1	...	4	1	2	6	29
Typhus Fever	...	...	...	.	..	...	...	...	...	..	...	...	...
Enteric or Typhoid Fever.	49	56	45	48	52	46	30	43	92	98	67	42	668
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever...	5	...	2	1	1	1	2	...	8	3	...	1	24
Puerperal Fever	4	7	4	3	1	1	3	4	2	2	...	1	32
Cholera	...	...	...	...	...	...	...	...	1	...	...	...	1
Erysipelas	59	58	62	59	57	55	54	57	64	53	60	84	722
TOTALS	496	465	507	450	507	475	430	397	689	640	656	625	6337

ISOLATION HOSPITALS.

During 1909 the Stanhope Urban District and the Weardale Rural Districts were still without any means of isolating ordinary cases of infectious disease, but a site has now been obtained by the Joint Hospital Committee, and it is to be hoped that suitable hospital accommodation will be completed during the present year.

Districts
without
hospitals.

There has during several recent years been a serious prevalence of scarlet fever and diphtheria in parts of these areas which probably would have been prevented had early isolation in hospital of the first cases been possible. In every other district in the county hospital accommodation has been provided for ordinary infectious diseases, but in some districts it is undoubtedly inadequate; thus additional hospital accommodation is recommended by the Medical Officers of Health of Jarrow (diphtheria), Barnard Castle, Brandon, Seaham Harbour, and the Rural Districts of Chester-le-Street, Durham, South Shields (diphtheria and doubtful cases), and Sunderland (diphtheria). As regards the last named district the Medical Officer of Health states that it has already been decided to provide additional accommodation. The hospital of the Tyne Port Sanitary Authority is still used for the reception of infectious patients from the County Borough of West Hartlepool and also from the Borough of Hartlepool and the Hartlepool Rural District, although when the West Hartlepool Corporation applied for the constitution of that town as a county borough it was understood that the Corporation would provide a proper hospital at an early date. It is quite certain that the accommodation provided in the Tyne Port hospital is not adequate for the districts it at present serves.

Additional
ho-s-pital
accommo-
dation
recom-
mended.

Inadequate
accommo-
dation.

The Medical Officer of Health of the Chester-le-Street Urban District recommends the formation of a joint hospital board or committee for the Union.

Dr. Johnstone, one of the Medical Inspectors of the Local Government Board, in his report on the Easington Rural

Steam
disin-
fectors.

District, issued in 1909, draws attention to serious deficiencies existing at the hospital for ordinary infectious diseases, and he recommends that a proper steam disinfectors should be provided. The Medical Officer of Health for Barnard Castle also advises the provision of a steam disinfectors, and there are several other hospitals in the county which are not properly equipped in this particular.

SMALL-POX HOSPITALS.

During the year negotiations with the North East Durham Joint Small-pox Hospital Board and the South Shields Corporation for the joint use of the borough hospital were brought to a satisfactory conclusion, the Corporation agreeing to join the Hospital Board, and to the purchase of the hospital by the Hospital Board from the Corporation, and an application was subsequently made to the Local Government Board for the amendment of the Joint Hospital Order and an official enquiry has since been held (February, 1910).

The Durham and Brandon Joint Hospital Committee made application to the County Council for the variation of its Hospital Order by the inclusion of Durham City. The Brandon Urban District Council subsequently objected to the inclusion of Durham City in the Joint Hospital District and the matter was still under consideration at the end of the year. During the year the Durham and Brandon Joint Hospital Committee obtained possession of a site near Shincliffe on which it is intended to isolate cases of small-pox and I understand it is intended to utilise some of the existing buildings for the purpose.

Small-pox
hospitals as
consump-
tive
sanatoria.

The small-pox hospital of the Chester-le-Street Rural District Council was used during the year as a sanatorium for consumptive patients as was also the small-pox hospital at Maiden Law belonging to the Lanchester Joint Hospital Board. The question of similarly utilising the small-pox hospitals of the Stockton Corporation and the Blaydon, Ryton, and Whickham Joint Hospital Committee, also received consideration during the year.

PHTHISIS AND TUBERCULOSIS.

In my annual report for 1908 I pointed out that the death rate from phthisis was the lowest ever recorded, it is, therefore, very satisfactory that a further decrease in the number of deaths from 808 to 780 occurred during 1909, the death rate per 1,000 population being 0·91 as compared with the rate of 0·95 in the previous year. For England and Wales the death rate from phthisis was 1·11 during 1908.

Further
decreased
death-rate.

On the other hand there was a slight rise in the mortality from other forms of tuberculosis, and the total death-rate from tuberculous diseases in the county was 1·64 per 1,000 population as compared with 1·66 in the previous year. During the year a considerable number of cases of phthisis were notified to sanitary authorities in the county under the Public Health Tuberculosis Regulations, 1908, Order, which came into force on the first day of the year, and which requires the notification to the Medical Officer of Health of cases of pulmonary tuberculosis among persons in receipt of medical attention from the Poor Law Guardians. In Jarrow and Hebburn a fee is paid to medical practitioners for voluntarily notifying cases of phthisis, and the Medical Officer of Health of Chester-le-Street Rural District reports that his Council are about to make application to the Local Government Board for sanction to pay a fee of 2/6 to medical practitioners for each case of phthisis notified, but it is a general experience that voluntary notification is not satisfactory, the majority of the cases of phthisis not being notified, and the Medical Officers of Health of a number of districts in the county, namely, Ryton, Stanhope, Felling and the Darlington Rural District recommend that the notification of the disease should be made compulsory.

L.G.B.
Order as to
notification
of Poor Law
cases.

Voluntary
notifica-
tion.

Several Medical Officers of Health comment on the value of sanatorium treatment for consumptive patients both from an educational and curative standpoint, and several of the District Councils in the county contribute to the County of Durham Society for the Prevention of Consumption, who have a sanatorium

Value of
sanatorium
treatment.

Means of
prevention.

for men at Stanhope and one for women near Wolsingham. Much more attention is now being given by sanitary authorities throughout the county generally to the means for preventing the spread of phthisis, and in many districts leaflets are distributed on the subject, and disinfection of dwellings undertaken after deaths from that disease. Dr. Stobo reports that in the Sunderland Rural District the Council have given instructions to the Health Officers—

(1) To visit all poor persons known to be suffering from phthisis, to provide for them sputum bottles and disinfectants, and to do what was possible to prevent them from re-infecting themselves, or infecting others.

(2) Wherever possible, to disinfect premises after the death or removal of a patient suffering from phthisis,

and he points out the desirability of providing hospital accommodation for consumptive patients.

Phthisis
now
included in
“Infectious
Diseases.”

The County Council, at their meeting held in October, resolved that the expression “Infectious Disease,” mentioned in Clause 26 of the Isolation Hospitals Act, 1893, shall, for the purposes of the Isolation Hospitals Acts, 1893 and 1901, apply within the Administrative County of Durham to pulmonary tuberculosis, and this action has since been confirmed by the Local Government Board.

County
sanatoria.

Application was made to the County Council by the County of Durham Society for the Prevention and Cure of Consumption, for a subscription towards the expenses of their sanatorium. There being a doubt as to whether the County Council could make such a contribution, the advice of the Local Government Board was asked, and they expressed the opinion that it was not competent for the County Council to contribute directly towards the expenses of a hospital provided by the Society, but that, if an order was made with the consent of the Local Government Board constituting the whole or part of the county a joint hospital district, and giving the committee for

the district power to deal with phthisis cases, that committee could enter into agreement for the use of any existing hospital and make payment for such use. The question of providing a county sanatorium for consumptives will probably shortly be considered by the County Health Committee, but there are difficulties in the way of constituting the whole county into a joint hospital district, one of which is the fact that there have already been formed joint hospital districts for parts of the county for ordinary infectious diseases and small-pox, and it would appear that such joint hospital districts cannot be included in a larger joint hospital district for phthisis.

Provision of
sanatorium
by County
Council.

As has already been stated, the small-pox hospitals in the Chester-le-Street and Lanchester rural districts are at present being used for the treatment of phthisical patients.

Small-pox
hospitals as
sanatoria.

ACUTE LUNG DISEASES.

There was a further decline in the deaths from bronchitis, pneumonia, and pleurisy, from 2,375 in 1908 to 2,042, which is equal to a death-rate of 2·38 per 1,000 population. In the third quarter of the year the death-rate from these diseases was as low as 1·05 per 1,000 population, though in the first quarter it was as high as 3·44. A large proportion of the deaths from lung diseases occurred among our infant population, 609 equal to 29·8 per cent. of the total deaths from these diseases occurring among children under one year of age and as has often been pointed out by the district Medical Officers of Health many of such deaths are preventable by reasonable care and attention on the parts of parents.

MALIGNANT DISEASES.

The deaths from cancer and other forms of malignant disease numbered 555, an increase of 10 as compared with the previous year. The death-rate per 1,000 population was 0·64 which is practically identical with the rate of the three previous years and it is some

satisfaction to note that the increased mortality from these diseases, which is so noticeable in many parts of the country does not at present obtain in this county.

BACTERIOLOGICAL EXAMINATIONS.

The following table gives particulars of the specimens sent by medical practitioners in the administrative county for examination during 1909, in accordance with the arrangement made between the County Council and the Durham College of Medicine :—

	Number of specimens submitted.	RESULTS.		
		Positive.	Negative.	Inconclusive
Diphtheria	543	261	274	8
Enteric Fever	121	63	58	...
Tuberculosis (Phthisis, &c.)..	422	155	267	...
Ankylostomiasis ... ..	...	...	...	...
Totals	1086	479	599	8

Increase in
examina-
tions.

There was an increase in the number of specimens submitted for examination of 150 as compared with 1908, and the proportion of positive results was 44·1 per cent. as compared with 40·8 per cent. in 1908, and 40·5 per cent. in 1907. In several of the health reports there is an appreciatory reference to the arrangement made by the County Council with the Durham College of Medicine for the bacteriological examination of specimens sent by medical practitioners in the county without charge to the patient where the latter is unable to afford the expense.

WATER SUPPLY.

There was very little change to record in the water supply of the county during 1909, and taken as a whole the supply may be generally regarded as satisfactory as to quantity,

while a large proportion of the population is supplied with water from upland gathering grounds which is free from serious pollution. The east and north-east parts of the county is largely supplied with water from deep wells sunk through the magnesian limestone, and as there is some doubt as to the purity of these supplies, owing to the fact that fissures exist in the magnesian limestone, down to the water bearing strata, by means of which surface pollution is possible, careful enquiry into the matter appears to me desirable. The towns of Darlington and Bishop Auckland, and to some extent Stockton and the adjoining districts obtain their water supplies from rivers which are not free from sewage pollution above their intake and such supplies cannot, therefore, be regarded as free from danger even though the best practical means may be taken to purify the water by storage and filtration. During the year the Medical Officer of Health for the Houghton-le-Spring Urban and Rural Districts called attention to the liability to pollution of the water supplied to dairy farms in those districts as disclosed by analysis, and it is to be hoped that steps will be taken to provide pure supplies in all such cases. In the Lanchester (Medomsley) Rural District it is stated that some of the farm water supplies are not satisfactory, but it would appear that steps are being taken to remedy these defects, and also to improve the water supplies to Bewick Main and Kibblesworth in the Chester-le-Street Rural District which are reported to be liable to pollution. In Houghton-le-Spring Urban District largely increased quantities of water have been obtained from the Sunderland and South Shields Water Company owing to the sources of the town supply failing. In Barnard Castle Rural District improvements in the water supply are reported at Cockfield, Middleton, and Staindrop, but at the last named village many of the inhabitants object to use the water company's supply, and drink water from shallow wells, many of which are liable to serious pollution. An improved water supply has been provided at Wolviston in the Stockton Rural District, and will shortly be provided for the village of Shadforth in the Durham Rural District. Negotiations are in

Danger of
river
supplies.

Dairy
farm
supplies.

Increased
supplies.

Improved
supplies.

progress for improving the distribution of the water supplies to the large colliery village of New Silksworth in the Sunderland Rural District. At present the water has to be carried from standpipes in the back streets, and the owners are being asked to lay on the water, either to the houses or into the back yards. A great improvement has been effected during recent years in the distribution of the water supply and the advantages of having the water laid into the dwellings or their yards is generally recognised. There was no evidence during 1909 that any outbreak of disease occurred in the county as the result of the consumption of impure water.

Water
supplies
and
infectious
disease.

HOUSING OF THE WORKING CLASSES.

Considerable attention is given to this subject in most of the annual reports, and it is obvious from their perusal that in many parts of the county there is still much insanitary house property; and moreover, the housing accommodation in a large number of districts is not sufficient for the requirements of the population, with the result that serious overcrowding exists. Owing to this scarcity of house accommodation, there is often difficulty in dealing effectively with property unfit for habitation, because the closing of such property would only increase the overcrowding in other dwellings, or else lead to the loss of employment in the district to those who would be turned out of their dwellings. Unfortunately there is in most sanitary districts a marked disinclination on the part of the sanitary authorities to provide under Part III. of the Housing of the Working Classes Act, 1890, workmen's dwellings, however much they may be needed, owing partly to the fear that private enterprise might be checked, partly to the feeling in the mining districts that the employers ought to provide the required housing accommodation for their workmen, and partly because of the uncertain life of the collieries which provide employment for the majority of the population. There is very little doubt, however, that in many populous parts of the county where there is at present gross overcrowding, the District

Difficulties
of dealing
with
insanitary
houses.

Sanitary
authorities
and Part iii.
of H.W.C.
Act, 1890.

Councils might with advantage provide for the erection of workmen's dwellings; and such houses could be immediately let at a rent sufficient to prevent any charge falling on the rates and would be an immense boon to the district.

The scheme of the Sunderland Rural District Council for erecting workmen's dwellings in the townships of Tunstall and Ryhope was completed during the year. In each district 60 houses or tenements were erected, 24 being four-roomed houses, with scullery, bath, &c., let at 6/2 per week; 12 being three-roomed houses let at 5/2 per week; 12 being three-roomed tenements at 4/7 per week; and 12 being two-roomed tenements at 4/1 per week. Each dwelling is provided with a bath with hot water attachment and a water-closet, in addition to the usual conveniences, with a yard and garden, and I understand there has been a great demand for these houses, and that they have been fully occupied ever since they were opened. The accommodation provided for the rents charged, compares very favourably with any other houses in the district.

Sunderland
R.D.C.
housing
scheme.

* Satisfactory progress was also made with the County Council scheme for erecting workmen's dwellings at Usworth, in the Chester-le-Street Rural District.

County
Council—
Usworth.

The County Council during 1909 exercised its statutory powers under Section 45 (2) of the Housing of the Working Classes Act, 1890, in respect of 261 houses situated at South Hetton and Haswell in the Easington Rural District, Middle Rainton in the Houghton Rural District, High Thistleflat, and Low Beechburn in the Auckland Rural District, and Ferryhill Station in the Sedgefield Rural District, and owing to default by the Rural District Councils proceedings for closing orders were commenced against the owners of insanitary dwellings in respect of 5 houses situated at South Wingate in the Easington Rural Districts.

County
Council's
action
respecting
unhealthy
dwellings.

* 50 houses have since been completed, and are now occupied.

Sanitary
survey
of urban
districts by
Asst.C.M.O.

The powers of County Councils with respect to houses unfit for habitation are practically confined to rural districts, but there is every reason to believe that in a number of urban districts in the county insanitary houses exist which urgently call for improvement. The sanitary survey of the urban districts of the county by the Assistant County Medical Officer, which was commenced in 1908, was continued in the year under review and comprehensive reports, in which the housing conditions receive special attention, were submitted to the County Council with regard to Annfield Plain, Barnard Castle, Benfieldside, and Bishop Auckland. A large number of insanitary houses were scheduled in these reports as being unfit for habitation, and it is to be hoped that the District Councils in question will take systematic steps for the closure or repair of such property. During the year a number of old wood huts used as dwelling-houses were demolished at Horden Colliery and the owners undertook to deal similarly with the same class of dwelling at Ushaw Moor and Malton Collieries in the Lanchester Rural District. The attention of the owners and of the Crook Urban District Council was drawn to similar houses situated at Grahamsley in that district and an intimation was sent to the owners that the County Council would expect the dwellings to be closed within two years.

Tenement
property—
provision of
front doors,
&c.

During the year the County Council communicated with the Local Government Board as to the desirability of insisting on the provision of front doors to all new tenemented property, and the Board having replied that a bye-law with such a requirement would be beyond the scope of the bye-laws which a local authority is required to make and the Board would not be prepared to confirm such a bye-law, the County Health Committee passed the following resolution:—“That the importance
“of providing front doors to tenemented dwellings be again
“urged upon the Local Government Board, especially in rural
“districts where the back streets are very frequently not made
“up, and are consequently almost impassable in winter time, and
“that if such a provision is beyond the scope of bye-laws

“relating to new streets and buildings, the Board be asked to
“take the necessary steps to enable such a provision to be made.”

The Board also declined during the year to sanction a bye-law prepared by the Chester-le-Street Rural District Council as to the provision of front doors in new tenemented property and the insertion of deafening floors between upper and lower tenements. I have no information that the Local Government Board have taken any definite action with respect to the resolution above quoted.

In the rural district of Chester-le-Street the three Inspectors of Nuisances have been appointed Building Inspectors which, especially having regard to the size of the district and the large amount of other work which devolves upon the District Surveyor, appears to me a very satisfactory proceeding.

Appoint-
ment of
building
inspectors.

During the year the Surveyor to the Ryton Urban District Council submitted to me a draft of bye-laws with respect to the erection and control of tenemented dwellings, and these have since been forwarded to the Local Government Board for their approval. Such bye-laws are greatly needed not only in Ryton but in other parts of the county, and it is to be hoped that the sanction of the Board to those prepared by the Ryton Urban District Council will be obtained.

Ryton U.D.
—new
building
bye-laws.

The following table, compiled from information kindly supplied by the District Surveyors and Inspectors, gives the number and distribution of houses erected and occupied in the Administrative County during 1909. In the previous year 4,165 houses were erected, and 3,832 occupied, so that there is a slight increase in the number of new houses erected and occupied during the past year:—

New houses
erected and
occupied
during 1909.

New houses
erected and
occupied
during 1909.

District.			Number of New Houses Erected.	Number of New Houses Occupied.	Housing of the Working Classes Acts.		
					Number of Dwellings Dealt with.	Number of Dwellings made Habitable.	Number of Dwellings Perma- nently Closed.
URBAN.							
Darlington Borough	..	..	363	363	..	..	..
Durham	..	..	11	11	5	5	1
Hartlepool	..	..	2	2	13	..	23
Jarrow	..	..	15	10	14	14	..
Stockton	..	..	142	..	..	..	3
Annfield Plain	..	..	116	116	29	..	22
Barnard Castle	..	..	9	2	..	..	..
Benfieldside	..	..	41	41	3	1	4
Bishop Auckland	..	..	84	67	5	1	..
Blaydon	..	..	153	153	17	6	8
Brandon and Byshottles	..	..	28	17	..	..	..
*Chester-le-Street	..	..	48	48	3	..	3
Consett	..	..	81	67	..	..	..
Crook	..	..	46	27	..	..	..
Felling	..	..	126	117	19	5	4
Hebburn	..	..	17	11	4	2	..
Hetton-le-Hole	..	..	66	57	..	..	..
Houghton-le-Spring	..	..	13	11	..	..	..
Leadgate	..	..	12	12	..	..	..
†Ryton	..	..	..	100	..	..	..
Seaham Harbour	..	..	161	120	6	7	..
Shildon	..	..	49	49	2	2	..
Southwick-on-Wear	..	..	4	4	6	1	2
Spennymoor	..	..	17	17	1	..	1
Stanhope	..	..	3	2	..	..	..
Stanley	..	..	259	259	78	2	23
Tanfield	..	..	56	56	78	64	..
Tow Law	..	..	4	6	..	..	..
Whickham	..	..	154	109	1	..	..
Willington	..	..	9	9	..	6	..
RURAL.							
Auckland	..	..	178	164	6	4	2
Barnard Castle	..	..	45	45	..	..	..
Chester-le-Street	..	..	459	478	83	27	56
Darlington	..	..	32	32	7	6	1
Durham	..	..	115	115	50	..	..
Easington	..	..	323	323	103	36	9
Hartlepool	..	..	9	9	..	..	..
Houghton	..	..	134	132	63	19	16
Lanchester	..	..	134	134	..	..	..
Sedgefield	..	..	346	348	60	18	17
South Shields	..	..	65	29	15	..	..
Stockton	..	..	44	44	..	..	2
Sunderland	..	..	178	172	38	13	..
Weardale	..	..	12	8	..	..	..
Administrative County			4143	3896	709	239	197

* This report is from June to December only.

† Plans passed for 154 houses, number actually erected not stated.

HOUSE DRAINAGE, SEWERAGE AND SEWAGE DISPOSAL.

Throughout the county generally, where covered drains and sewers have been constructed, the house drain connections are generally well trapped, and in only a small proportion of dwellings in the county are there any drain connections or sinks within the dwelling, the gully traps communicating with the drains and sewers being either placed in the back street or in the back yard.

Trapping of
house
drains.

There are still a large number of open channels in some of the mining villages of the county which constitute the only provision made for carrying the sewage and slop waters from the individual houses. These channels frequently have pervious joints and are otherwise defective and, as I have previously pointed out, are a serious nuisance and cause of ill-health. I am glad to say, however, that there is an increasing tendency to abolish them in favour of covered drains with proper trapped openings, but in a few districts the open channels are still advocated and retained with a persistence worthy of a better cause.

Open
channels.

Dr. R. W. Johnstone, in his report issued during 1909 to the Local Government Board on the sanitary circumstances and administration of the Easington Rural District, referred to open channels in the following words:—"Apart, however, from the
"disadvantages of open channels which may arise from faulty
"laying, insufficient cleansing, or from frost, the system itself is
"open to condemnation from a health point of view. House
"sewage is always liable to specific pollution, and if such con-
"taminated sewage is allowed to flow in open channels past whole
"rows of houses through back streets which constitute the usual
"playground of the children, it is inevitable that danger to health
"should arise. This danger is still greater when house slops are
"thrown on the ground at the back doors, and the surface soil
"around the houses is constantly fouled," and it is to be hoped that in the near future this faulty system of drainage will be entirely abolished in the county.

Easington
R.D.,
L.G.B.
inspection
and report.

Sewage disposal schemes.

As regards sewage disposal I am sorry to say that in certain districts where the district authority has undertaken to provide sewage disposal works for the prevention of serious pollutions the progress during 1909 was extremely slow. This was particularly the case in Bishop Auckland, Spennymoor and Willington Urban Districts, and in Auckland Rural District (Witton Park). On the other hand schemes were recommended for extensive sewage disposal works in the Whickham Urban District (Marley Hill and Byermoor), Auckland Rural District (West Auckland and Witton Park), Easington Rural District (scheme for carrying the sewage from several townships to the sea), and in Stockton Rural District (Norton), and in several of the district Medical Officers of Health's reports improvements in sewerage and sewage disposal are mentioned and are recorded in the summary of these reports.

Damage to sewers, &c., by subsidence.

In some parts of the county, particularly at Houghton-le-Spring and Stanley and at Langley Park, in the Lanchester Rural District, subsidences have occurred which have seriously damaged the sewers and sewage disposal works.

County Council's action during 1909.

The following table indicates the action which has been taken by the County Council, and the progress made by the district authorities towards preventing pollution of water-courses in the county. A list of places is also given where sewage disposal works are still needed for the prevention of pollution of important water-courses. From the periodical reports of the County Rivers' Inspector which were submitted during the year to the County Council, it is obvious that owing, in some cases, to growth of population, in others, to bad construction and inefficient supervision, a number of sewage disposal works in the county do not satisfactorily purify the sewage supplied to them. Several streams in the county are from time to time seriously polluted by coal-washings and waste products from manufactories, chemical works, patent coke ovens, colliery waste-heaps, etc. It is very difficult to effectively deal with such pollutions, as the powers given by the Rivers Pollution Prevention Acts are inadequate.

A STATEMENT OF STATUTORY NOTICES SERVED DURING 1909 AND RESULTS.

Defendants.	Place.	Stream Polluted.	Date of Notice.	Result of Notice without Legal Proceedings.
Chester-le-Street R.D.C. . .	New Lambton and Sixth Pit Sewage Works ..	Sedgeleth Beck..	24/11/09	Plans, &c., are being prepared for the extension of these works.
Chester-le-Street R.D.C. . .	Pelaw Grange and Brown's Buildings ..	Rowleth Burn, &c.	24/11/09	A Committee has been appointed to report on this matter.
Blaydon U.D.C. ..	Rowland's Gill ..	Spenn Burn and River Derwent	24/11/09	The District Council intended to deal with this matter as soon as possible.
Durham R.D.C. ..	East Hetton ..	Kelloe Beck ..	24/11/09	The District Surveyor's report on this matter will be considered at the next meeting of the District Council.
Willington U.D.C. ..	Willington ..	Willington Burn and River Wear	12/5/09	Plans and estimates are being prepared.

There were no County Court proceedings during 1909.

Sewerage and sewage disposal. Statutory notices served.

New
sewage
disposal
works.

SEWAGE DISPOSAL WORKS PROVIDED DURING 1909 :—

AUCKLAND RURAL DISTRICT—

South Church ; Auckland Park Colliery, &c.

DURHAM RURAL DISTRICT—

Crossgate Moor.

WEARDALE RURAL DISTRICT—

Ireshope Burn.

Extensions
to sewage
works.

EXTENSIONS TO SEWAGE DISPOSAL WORKS COMPLETED
DURING 1909 :—

AUCKLAND RURAL DISTRICT—

Coundon.

HOUGHTON-LE-SRING RURAL DISTRICT—

William Henry Pit, Fencehouses.

Works to
be
provided.

LIST OF PLACES WHERE THE DISTRICT COUNCIL AT THE END
OF 1909 HAD UNDERTAKEN TO PROVIDE WORKS :—

AUCKLAND RURAL DISTRICT—

Witton Park ; West Auckland, &c. ; Byers Green ; Tod Hills ; Hunwick ; Sunnybrow.

CHESTER-LE-STREET RURAL DISTRICT—

Ouston Colliery ; Perkinsville, &c. ; Pelton Village ; and Pelton Fell Colliery.

DURHAM RURAL DISTRICT—

Bearpark Colliery.

EASINGTON RURAL DISTRICT—

South Hetton Colliery, &c., (trunk sewer to the sea).

SEDGEFIELD RURAL DISTRICT—

Ferryhill (North Side).

BISHOP AUCKLAND URBAN DISTRICT—

Bishop Auckland.

BLAYDON URBAN DISTRICT—

Blackhill Mill ; Chopwell Colliery and Rowlands Gill.

DURHAM URBAN DISTRICT—

Durham.

SPENNYMOOR URBAN DISTRICT—

Spennymoor (whole district).

STANHOPE URBAN DISTRICT—

Stanhope.

TOW LAW URBAN DISTRICT—

Tow Law.

OTHER POLLUTIONS STILL REQUIRING ATTENTION:—

Polluting
districts.

RIVER GAUNLESS AND TRIBUTARIES.

AUCKLAND RURAL DISTRICT—

Butterknowle ; Copley Bent ; Low Evenwood ; The Oaks
and a portion of Evenwood.

RIVER SKERNE AND TRIBUTARIES.

DARLINGTON RURAL DISTRICT—

Aycliffe and Whesoe.

RIVER BROWNEY AND TRIBUTARIES.

CHESTER-LE-STREET RURAL DISTRICT—

Witton Gilbert.

LANCHESTER RURAL DISTRICT—

Lanchester ; Ushaw Colliery ; Hamsteels Colliery and
Railway Terrace.

CROOK URBAN DISTRICT—

Peases' West, Stanley.

RIVER WEAR AND TRIBUTARIES.

AUCKLAND RURAL DISTRICT—

Binchester Blocks.

CHESTER-LE-STREET RURAL DISTRICT—

Plawsworth ; Plawsworth Bar, &c.

DURHAM RURAL DISTRICT—

East Hetton ; California, Coxhoe ; Kimblesworth.

WEARDALE RURAL DISTRICT—

Daddry Shield ; Eastgate and West end of Westgate

WILLINGTON URBAN DISTRICT—

Page Bank and a portion of Willington.

—

Unsatis-
factory
sewage
works.

SEWAGE WORKS FOUND TO BE INADEQUATE OR FREQUENTLY
UNSATISFACTORY DURING 1909:—

AUCKLAND RURAL DISTRICT—

Coundon ; Challies Row, Newfield.

CHESTER-LE-STREET RURAL DISTRICT—

Alma Pit ; New Lambton.

EASINGTON RURAL DISTRICT—

Shotton Colliery ; Murton Colliery ; Thornley Colliery.

HOUGHTON-LE-SPRING RURAL DISTRICT—

William Henry Pit, Fence Houses.

LANCHESTER RURAL DISTRICT—

Croniwell ; Esh Winning ; Craghead.

SEDGEFIELD RURAL DISTRICT—

Bishop Middleham ; Ferryhill (North Side).

STOCKTON RURAL DISTRICT—

Stillington Iron Works.

ANNFIELD PLAIN URBAN DISTRICT—

Kyo; Dipton.

BENFIELDSIDE URBAN DISTRICT—

Shotley Bridge.

BRANDON AND BYSHOTTLES URBAN DISTRICT—

Lymington Terrace.

CHESTER-LE-STREET URBAN DISTRICT—

Chester-le-Street Sewage Farm.

SPENNYMOOR URBAN DISTRICT—

Ox Close, Spennymoor.

TOW LAW URBAN DISTRICT—

Tow Law.

WILLINGTON URBAN DISTRICT—

Willington.

EXCREMENT DISPOSAL AND REMOVAL.

Probably the most unanimous recommendation to be noted in the reports of the district Medical Officers of Health is the abolishing of the ashpit privy system, and it is satisfactory to note that in an increasing number of reports, the advantages of the water-carriage system over any conservancy method of excrement disposal is being more widely advocated. Every sanitarian recognises that the small ash closet if properly constructed and lighted and ventilated is a great improvement over the old fashioned ashpit privy, but viewed from a public health point of view, it is certainly no exaggeration to say that the water-closet is as much superior to the ash-closet as the latter is to the ash-pit and privy system. In some districts water-closets are now being substituted for ash-pit privies, and in the Seaham Harbour and Shildon Urban Districts and in a few other districts it has been decided that in future water-closets shall be provided for all new houses. In the houses erected under Part III. of the Housing of the Working Classes Act, 1890, by the Sunderland

Abolition of
midden-
privies.

Rural District Council at Ryhope and Tunstall, and by the County Council at Usworth, the water carriage system has been adopted and it is very satisfactory to note that the owners of the Dawdon Colliery, Limited, have decided to provide water-closets for the new houses they are erecting, and it is to be hoped that this excellent example will be followed in other districts.

Scavenging

The work of scavenging and removal of excrement and refuse appears to be fairly well performed in most of the sanitary districts, and is for the most part undertaken by contractors, though in some districts the local authority themselves undertake the work which is by far the most effective method. In the Leadgate Urban District, however, and in the most rural parts of the county the scavenging and removal of refuse are left in the hands of owners and occupiers, who have to make arrangements with farmers or others for the emptying of their receptacles, with the result that the work is often greatly neglected. In Felling and in the Rural District of Auckland night scavenging is strongly recommended. In the report for the Houghton Rural District re-

Night
scavenging

Refuse tips.

ference is made to nuisances which occurred from deposits of offensive refuse brought from other districts, and from time to time complaints have been received by me respecting nuisances arising from the placing of refuse tips in unsuitable positions. It is certainly very desirable that local authorities should in making contracts for the removal of offensive refuse in their districts insist that the contractors do not establish tips in positions where nuisances may arise. The Medical Officer of Health for the Weardale (St. John's Rural District again specially refers to this matter. In some districts refuse destructors have been constructed, and in several of the district health reports the provision of destructors is recommended.

Refuse
destructors.

DAIRIES, COWSHEDS, AND MILKSHOPS.

In the majority of the district health reports, reference is made to the sanitary circumstances affecting the milk supply, and details are included in the summary of each report. In a few

reports, however, this important subject receives very slight consideration, and more details are desirable. Although there appears to be a general improvement in the condition of the cowsheds in many districts, it is obvious from the district reports that many of them are still far from satisfactory, both as regards construction, cubic space per cow, water supply, and cleanliness of surroundings. It is satisfactory to note that a large number of district sanitary authorities in the county have now adopted the recommendation of the County Council, that in all cowsheds the minimum of 600 cubic feet of air space and 50 square feet of floor space per cow should be required, and in several districts new regulations relating thereto have now received the sanction of the Local Government Board.

Regulations
as to
air-space in
cowsheds.

During the year the Government introduced their Milk and Dairies Bill, which contained many valuable provisions, but unfortunately it was ultimately withdrawn, and the legislation which is so urgently needed is still a thing of the future. By Clause 10 of the Milk and Dairies Bill a County Council was to have power to take action on complaint being made to them:—

Milk and
Dairies Bill.

- (a) From any four inhabitant householders of the county district; or
- (b) From the parish council or parish meeting of any parish within the district; or
- (c) From the sanitary authority of a district within which milk is supplied from any dairy in the county district.

It appeared to me desirable, however, that a County Council should also have power on complaint by their Medical Officer of Health to take action under the clause, for otherwise a County Council would frequently be unable to act even if serious default was made by the district sanitary authority in consequence of no complaint having been received as required by the clause as drafted in the Bill; and a strong representation was subsequently sent by the Durham County Council to the Local Government Board

Suggested
amend-
ments.

asking for the amendment of the clause in that particular. I am confident that until powers are given to County Councils or the Local Government Board to act in case of default of the district sanitary authority, the condition of the dairies, cowsheds, and milk-shops will in many districts throughout the country remain in a more or less unsatisfactory condition.

Scarlet
fever at
Spenny-
moor.

The Medical Officer of Health of Spennymoor, reports that several cases of scarlet fever and severe sore throat in his district were associated with an impure milk supply. It was found that the cows supplying the milk had fouled their bodies with sewage matter to which they had access and it was supposed that during the process of milking the milk became contaminated.

Milk
supplies
and tuber-
culosis.

During the year several orders made by the Sunderland Corporation prohibiting the supply of milk to that borough from farms in the county because samples which had been taken contained tubercle bacilli, were received by the County Council and the Medical Officer of Health of Newcastle-on-Tyne also informed me that a sample of milk supplied to that city from a farm in the county was found to be tuberculous. The attention of the district Medical Officer of Health was drawn to these cases, but in a report to the County Council I pointed out that the County Council have no powers either to examine cows suspected to be tuberculous or to prevent the sale of milk from such cows, and that isolated action by sanitary authorities such as that taken by the Sunderland Corporation for the prohibition of milk supplies supposed to be tuberculous was of no practical value from a public health standpoint as the milk in question excluded from Sunderland would, without doubt, be sold in adjoining sanitary districts. General legislation is urgently needed to prevent the sale of milk from tuberculous animals in any district, and the time has now arrived when a systematic effort should be made by breeders of cattle, farmers, and others to eliminate tuberculosis from their herds. That this can be done has been conclusively proved in Denmark where by

the adoption of Professor Bang's method tuberculosis in cattle has been reduced to a minimum and many large herds have been entirely freed from it at a very small expense. It is stated in the health reports for Southwick and the Sunderland Rural District that the cows are periodically inspected by a veterinary surgeon and that an increasing number of farmers in these districts are only keeping cows which have been shown by the tuberculin test to be free from tuberculosis. In several other districts the periodical veterinary inspection of all cows is advocated.

SLAUGHTER-HOUSES.

There is very little to report with respect to these structures, but reference is made in many of the reports to the fact that many of the private slaughter-houses are, owing to their position, or faults of construction, unsatisfactory for the purpose, while it is recognised that proper supervision of the meat of the animals killed therein is almost impossible. In several of the reports the provision of public slaughter-houses is strongly recommended. New bye-laws with respect to slaughter-houses have been adopted for the Chester-le-Street Rural District, and so far as can be gathered from the district annual reports slaughter-houses are either licensed or registered in all the sanitary districts of the county except Whickham and the rural district of Easington. The Medical Officer of Health of the South Shields Rural District states in his annual report that the district council have decided to undertake removal of offal from the slaughter-houses for a small fee.

New
bye-laws.

Removal of
offal by
Sanitary
Authorities.

FOOD AND DRUGS ACT.

The number of samples taken for analysis in the administrative County, exclusive of boroughs, by the county or district officials during 1909, was 841, and of these 85 or 10·1 per cent. were certified to be adulterated. In the previous year the number analysed was 801, of which 76 or 9·5 per cent. were found to be adulterated.

The administration of the Act in the non-county boroughs is undertaken by the local officials, and of the 326 samples taken for analysis 21 or 6·4 per cent. were certified to be adulterated.

The taking of samples under the Food and Drugs Act in this Administrative County is in the hands of the Chief Inspector of Weights and Measures, who reports direct to the Executive Committee of the County Council.

Pure milk
standards.

In my last annual report I referred to the increasing difficulty of obtaining convictions in cases where prosecutions had been instituted against persons found to be selling milk which, judged by the recognised standard, was adulterated by water or deficient in cream, and bearing on this matter the following remarks of the Medical Officer of Health, of Bishop Auckland, are interesting :—
 “I have received complaints about the poverty of the milk in
 “some instances. This is a very serious matter for infants and
 “young children, who should be largely fed on milk that has not
 “been tampered with. Prosecutions were instituted at the Bishop
 “Auckland Police Court in cases where deficient milk had been
 “sold, but they were unsuccessful. The excuses which were
 “advanced by the vendors of the milk for its poverty were readily
 “accepted by the Bench. I hope the Inspector will not be dis-
 “couraged, but will try again, as the occupants of the Bench are
 “not always the same.”

FACTORIES AND WORKSHOPS.

In only a few reports is any detailed reference made to the sanitary circumstances of these places, but in most districts they appear to have been visited on one or more occasions. As a rule, the information on this subject is mostly confined to statistics entered in the table issued by the Secretary of State for inclusion in the annual reports of the medical officers of health. The general sanitary state of the workshops in the county appears to be fairly satisfactory, and apparently very few persons engage in home-work.

COMMON LODGING-HOUSES.

In only a few of the district reports is detailed information given as to their condition, and the remarks of the medical officers of health of Jarrow and Stockton, quoted in the summaries of their health reports of those districts, fairly accurately represent, I fear, the condition of many of the common lodging-houses in the county, though in a few districts, notably in Consett, considerable improvements have been effected. As I stated in my last annual report the provision of properly constructed and well-managed lodging-houses by the sanitary authorities of the populous districts in this county would be a great boon to many single working men, and would do a great deal to relieve the overcrowding and other objections associated with lodgers in dwelling-houses already overcrowded.

STREETS AND BACK-STREETS.

Improvements in the condition of the streets are mentioned in many of the reports, and there is reason to believe that the importance of the paving with impervious material of the back-streets of populous districts is being generally recognised. Important street paving works were carried out during the year in Hebburn, Consett and Whickham, and the making, paving, and channelling of a large number of streets in the rural districts of Auckland, Chester-le-Street, Easington, Houghton, and Sunderland have been undertaken. The Medical Officer of Health of the Sedgefield Rural District in his report comments very strongly on the nuisances arising from the bad condition of the streets, and in many other districts, both urban and rural, this matter is the subject of adverse comment. In some districts increased attention is given to the proper paving, with impervious material, of house-yards and the ground in the vicinity of dwellings. From a public health point of view this is a most important requirement, as it not only tends to keep the walls and dwellings free from dampness but it largely prevents the pollution of the soil and sub-soil.

BYE-LAWS.

New bye-laws with respect to new streets and buildings, &c., came into force during the year in the Easington Rural District, as have also new bye-laws for the Southwick-on-Wear Urban District with respect to slaughter-houses, common lodging-houses, nuisances, offensive trades, cleansing of footways, and houses let-in-lodgings. Bye-laws with respect to tenemented dwellings were submitted by the Ryton Urban District Council to the Local Government Board for approval.

New regulations with respect to slaughter-houses were adopted by the Chester-le-Street Rural District Council, and the revision of the bye-laws with respect to new streets and buildings in their district also received attention. Most districts in the county now possess fairly up-to-date sanitary bye-laws.

MIDWIVES ACT.

Super-
vision.

As Executive Officer under this Act I am responsible for the supervision of all certified midwives in the county, and it is the practice of the County Midwives Inspector to visit each midwife at least once a quarter. Since the administration of this Act by the County Council there has been a very marked improvement in the cleanliness and general competency of the midwives in the county.

Number
of
certified
and
practising
midwives.

The number of certified midwives living in the county on the 31st March, 1910, was 223, the same number as in the previous year, but only 60 of these held the certificate by virtue of having passed the examination of the Central Midwives Board or an examination recognised by the Board. Only 161 midwives notified their intention to practise during 1909 as compared with 171 in 1908.

Puerperal
fever.

. During 1909 five cases of puerperal fever in the practices of midwives in the county were brought to my notice, and all necessary precautions to prevent the spread of infection were insisted upon. The number of still-births notified to me by

midwives was 87, and 97 intimations of midwives sending for medical help were also received, as were also notices of the deaths of one mother and 19 infants in the practices of midwives. All such deaths were the subject of special enquiry by the Midwives Inspector.

Midwives' notifications.

The deaths of eight midwives were reported to me, three of them being women whose names had been previously removed from the Midwives Roll, and their certificates cancelled, owing to acts of misconduct reported to the Central Midwives Board by the Local Supervising Authority. Thirty-five changes of address were also reported to me.

Deaths and changes of address of midwives.

The names of two midwives were removed from the Midwives Roll on account of misconduct, while one was similarly removed at her own request. The number of midwives warned by the Executive Officer for breaches of the Rules of the Central Midwives Board was 13, and one was also censured by the Midwives Committee. Two midwives were formally reported to the Central Midwives Board for misconduct under Section 8 (2) of the Midwives Act, 1902, with the result that one was not proceeded with by the Central Midwives Board for want of further evidence, while the other was still under consideration at the end of the year.

Removals from Roll for misconduct, &c.

From statistics prepared for me by the Midwives Inspector, it appears that the number of births attended by certified midwives in the Administrative County during 1908 was 4,073, which is equal to only 13 per cent. of the total registered births.

Extent of midwives' practices.

The Education Committee on the recommendation of the Midwives Committee decided to introduce midwifery scholarships to women who are prepared to practise midwifery in the county, and during the year scholarships were granted to two women, and they entered on the required period of training at maternity hospitals recognised by the Central Midwives Board. By Section 1 (2) of the Midwives Act, 1902, it is illegal for any woman after the 31st March, 1910, to practise midwifery habitually and for gain except

Midwifery scholarships.

under the directions of a general medical practitioner, unless she holds the Certificate of the Central Midwives Board, and if after that date steps are taken to prevent the practise of uncertified women in this county, there will no doubt be a very considerable decrease in the number of midwives. In some districts there will probably be need for additional certified midwives, and for that purpose and with the object of supplying that need the County Council scholarships have been instituted.

ELEMENTARY SCHOOLS.

Medical
inspection
of school
children.

In the county education area the sanitation of schools has my special attention, owing to the fact that I hold the position of School Medical Officer. The work of school medical inspection is carried on by six whole time medical practitioners acting under my directions, and a special report on the sanitary circumstances of each school visited by them is submitted to me. Any serious defects noted are reported to the Clerk to the Education Committee for attention. In a few of the District Annual Reports (Whickham, and the Chester-le-Street and Durham Rural Districts) reference is made to sanitary inspections of school premises, but it does not appear that in the majority of the sanitary districts in this county outside the autonomous education areas, the Medical Officers of Health exercise any systematic sanitary supervision over elementary school premises.

Sanitary
inspection
of schools.

School
closure for
infectious
disease.

During 1909 I received notice of the closure of 109 departments of elementary schools in the county education area, owing to the prevalence of infectious disease, measles being the disease in 89 instances, whooping cough in 8, scarlet fever in 8, chicken-pox in 3, and mumps in 1.

SANITARY LEGISLATION, 1909.

The Housing, Town Planning, &c., Bill, introduced by the Government in 1908, became law towards the end of the year with comparatively few amendments, and is a very important measure. The powers of sanitary authorities with respect to

insanitary dwellings are strengthened in many particulars, and closing orders in respect of houses unfit for human habitation can be made by the sanitary authority of the district in which such houses are situated, subject to an appeal by the owner to the Local Government Board, an application to a bench of magistrates for closing orders being no longer necessary. The powers of County Councils with respect to insanitary houses and the erection of workmen's dwellings in rural districts are also somewhat increased, but it is in my opinion unfortunate that those powers were not extended by the Act to Urban Districts. Other important provisions in the Act have reference to the prohibition of the erection of back-to-back houses; to the preparation of Town Planning schemes by local sanitary authorities; and to the appointment, duties and tenure of office of County Medical Officers. Under the Act every County Council must appoint a Medical Officer of Health, whose duties are to be in part prescribed by the Local Government Board, and for whose removal from office the consent of the Board is necessary. The Act also requires that every County Council shall establish a Public Health and Housing Committee, to which all matters of public health and housing shall stand referred.

ADOPTIVE ACTS.

During 1909, 29 of the district authorities in the county decided to adopt sanitary provisions of the Public Health Acts (Amendment) Act, 1907, and by the end of the year 17 authorities had received the sanction of the Local Government Board to such adoption. In most other districts the matter was receiving the serious attention of the District Councils, and in only two districts (Bishop Auckland and Hartlepool Rural) had the councils intimated their intention not to adopt the Act.

P.H.A.
(Amend-
ment)
Act, 1907.

The Notification of Births Act was adopted by the Brandon and Byshottles Urban District Council during the year, and a health visitor appointed for that district by the County Council. This Act is now in force in the Urban Districts of Stockton, Brandon and Byshottles, Shildon, Southwick-on-Wear, Stanley,

Notification
of Births
Act.

and Whickham, and in each district is administered by one or more lady health visitors.

Infectious
Disease
(Notifica-
tion) Act.

In the Barnard Castle Rural District measles has been added to the diseases required to be notified under the Infectious Disease (Notification) Act, and the Barnard Castle Urban District Council have also decided that cases of measles shall be notified in their district. In the Chester-le-Sreet Rural District cases of glanders and anthrax in the human subject are now required to be notified, and the Medical Officer of Health of Spennymoor recommends that those two diseases as well as hydrophobia should be notified in his district.

Education
(Provision
of Meals)
Act.

During part of the year 1909 it was found necessary to put the Education (Provision of Meals) Act into operation in Darlington, Hartlepool, Stockton, Felling, Southwick-on-Wear, and in the parish of Fulwell, in the Sunderland Rural District, owing to the great distress which prevailed within those districts.

LOCAL GOVERNMENT BOARD ENQUIRIES.

The following Local Government Board enquiries were held during the year into applications from Local Authorities in the county for loans for sanitary purposes:—

1909.	Applicant.	Amount.	Purpose.	Result.
Feb. 24	Stockton R.D.C...	£7,301	Sewerage for the Parish of Norton	Still under consideration.
July 28	Jarrow Corporation	£1,200 £960	Works of Private Street Improvement Sewerage	Application granted.
Aug. 10	Spennymoor U.D.C.	Not exceeding £25,000	Sewerage and Sewage disposal	Still under consideration.
Oct. 5	Auckland R.D.C..	£3,000	Sewerage and Sewage disposal for the Township of Byers Green.. ..	Still under consideration.
Oct. 6	Auckland R.D.C..	£4,000	Sewage disposal at Witton Park for the Parish of Pollards Land and the Townships of Auckland West, Escombe, Evenwood and Barony, and Witton-le-Wear ..	Still under consideration.

COUNTY COUNCIL ENQUIRIES.

The only enquiry bearing on public health administration held by the County Council during the year 1909 was on the 7th September, into an application from the Blaydon Urban District Council for the division of the district into two separate urban districts. The application was refused.

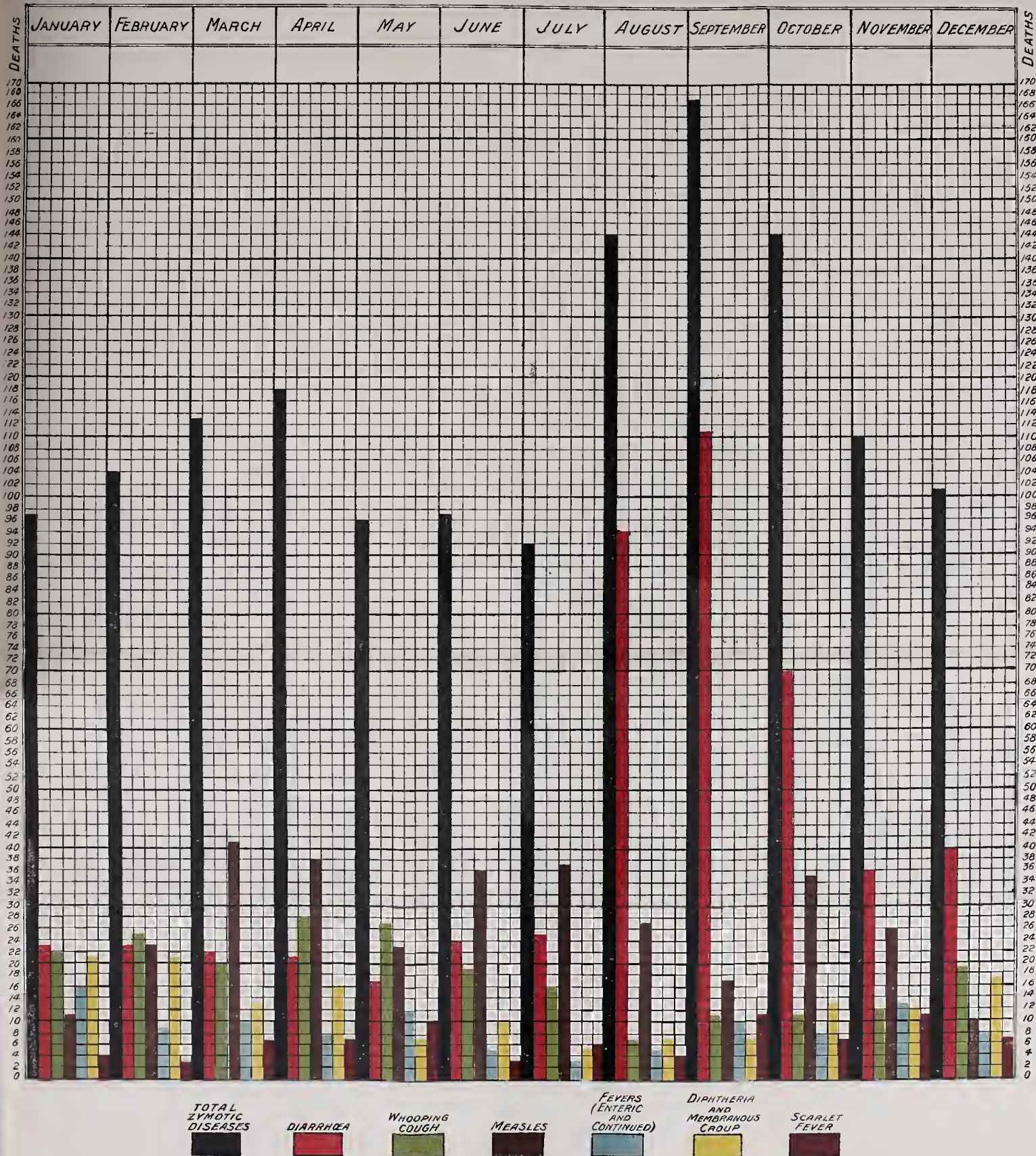
GENERAL STATISTICS.

On the following pages will be found a table and coloured chart showing the monthly mortality in the administrative county from the chief zymotic diseases, &c., and at the end of the summary are tables relating to the vital statistics and other matters of interest in the various sanitary districts.

TABLE SHEWING THE NUMBER OF BIRTHS, DEATHS, AND DEATHS FROM THE CHIEF ZYMOTIC DISEASES
IN THE ADMINISTRATIVE COUNTY OF DURHAM, DURING EACH OF THE MONTHS OF 1909.

	Births.	Deaths.	Deaths under 1 year.	Total Zymotic Deaths.	Small- pox.	Scarlet Fever.	Diph- theria and Membran- ous Croup	Fevers (Enteric and Con- tinued).	Measles.	Whooping Cough.	Diarrhoea.
JANUARY ..	2542	1249	352	97	..	4	21	16	11	22	23
FEBRUARY ..	2300	1151	326	104	..	3	21	9	23	25	23
MARCH..	2720	1368	356	113	..	7	13	10	41	20	22
APRIL ..	2695	1340	293	118	..	7	16	8	38	28	21
MAY ..	2639	1106	275	96	..	10	7	12	23	27	17
JUNE ..	2819	1015	290	97	..	3	10	5	36	19	24
JULY ..	2490	887	258	92	..	6	5	3	37	16	25
AUGUST ..	2556	946	300	144	..	4	7	5	27	7	94
SEPTEMBER ..	2357	970	309	167	..	11	7	10	17	11	111
OCTOBER ..	2478	1010	313	144	..	7	13	8	35	11	70
NOVEMBER ..	2461	1090	324	110	..	11	12	13	26	12	36
DECEMBER ..	2353	1290	396	101	..	7	17	8	10	19	40
TOTALS ..	30410	13422	3792	1383	..	80	149	107	324	217	506

CHART SHEWING THE NUMBER OF DEATHS DURING EACH MONTH OF 1909 FROM THE SEVEN CHIEF ZYMOTIC DISEASES



NOTE:— There were no deaths from smallpox during the year.

BOROUGH.

DARLINGTON.

JAMES LAWRENCE, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	52,000	51,000
Birth-rate	29·05	30·88
Death-rate	13·73	15·00
Zymotic death-rate	0·86	1·56
Phthisis death-rate	0·86	1·15
Total Tuberculosis death-rate	1·49	1·62
Respiratory diseases death-rate	1·71	1·76
Infant mortality-rate per 1,000 births	101	118

Intection Diseases — Cases & (Deaths).

	1909.	1908.
Total notifications	154	159
Smellpox	nil.	nil.
Scarlet fever	63	50
Diphtheria	40	74
Fevers (Enteric, &c.)	29	21
Puerperal fever.. .. .	3	2
Cases treated at hospital ..	112	122
Measles.. .. .	(nil.)	(15)
Whooping cough	(23)	(18)
Diarrhoea	(7)	(36)

GENERAL SANITATION.

Water Supply (water from the Tees purified by passage through sand filters) was satisfactory. The action of the filters was carefully controlled by frequent analyses of the water. The surface of the filters is renewed every one to three months, according to the amount of matter in suspension in the river water.

Sewerage.—A number of new streets were sewered.

Scavenging was done satisfactorily. Dr. Lawrence states :
“The ashpits are oftener cleaned out than formerly, and such
“large quantities of refuse are not allowed to remain in proximity
“to the dwellings to pollute and contaminate the air. I hope
“extra attention will be bestowed upon the ashpits to keep them
“often cleaned out during the summer, because dirty ashpits
“collect flies, and these find their way into the houses and spread
“disease. The back streets have also been kept splendidly clean,
“if anything, better than the front streets, so that both back and
“front streets will bear examination and pass with credit.”

Housing.—(a) New Houses : About 365 were registered, making an increase of over 2,800 since 1901. (b) Insanitary Property : One house was closed and has since been rendered habitable. Dr. Lawrence says the most important improvement effected “has been the substitution of water-closets for privies “and ash-boxes for the old sunken ashpit, and in some cases “small privy-ashpits have been the substitutes, though I do not “approve of these except in rare cases, as they are little improve- “ment on the old privy with its large ashpit adjoining.”

Nuisances.—A number relating to structural defects of houses, defectively-paved yards, pigsties, and gipsy vans located within the borough on waste land without provision of water and conveniences, &c., were dealt with.

Streets.—A number of new streets were made and also some back streets were paved with scoria brick.

Dairies and Cowsheds (23).—There are altogether 91 milk sellers. Seven nuisances—insanitary conveniences (2), want of cleanliness (4), and accumulation of manure (1)—were dealt with in connection with the cowsheds.

Slaughter-houses.—An application for a license for some unsuitable premises was refused. Measures were taken to enforce cleanliness and removal of refuse in several instances. Dr. Lawrence says :—“As I have had occasion to mention in former “reports the great difficulty in keeping an observation on the meat “that is exposed for sale from so many slaughter-houses, I think “the committee should be very careful indeed about the licensing “of new premises, and increasing the number of those already in “existence. The time cannot be far distant when a public “abattoir will be an absolute necessity to ensure proper meat “inspection for the borough. With this in view in the near “future, the multiplication of slaughter houses is undesirable.”

Offensive Trades.—Steps are being taken to prevent nuisances occurring in two premises where fat rendering is carried on.

Food and Drugs.—152 samples were analysed of which 18 were adulterated. In 14 instances milk was found to contain added water and penalties were imposed upon 5 of the vendors. A vendor of treacle, containing 50 per cent. glucose, was fined one pound and two guineas costs.

Factories and Workshops (397) and Bakehouses.—38 notices for the most part to enforce cleanliness or the improvement of the sanitary accommodation, were served and complied with except in one instance.

SANITARY REQUIREMENTS.

1.—Provision of a refuse destructor.

2.—Provision of a public slaughter-house.

3.—The conversion of the small-pox hospital into a temporary sanatorium for the treatment of consumption.

DURHAM.

A. M. VANN, M.R.C.S., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	17,200	17,200
Birth-rate	25·23	26·10
Death-rate	16·62	17·79
Zymotic death-rate	0·69	2·26
Phthisis death-rate	1·04	0·98
Total Tuberculosis death-rate	2·35	1·56
Respiratory diseases death-rate.. .. .	2·58	3·19
Infant mortality-rate per 1,000 births	135	175
Low birth-rate (see page 4).		

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	66	51
Smallpox	nil.	nil.
Scarlet fever	34	20
Diphtheria	13	13
Fevers (Enteric, &c.)	6	10
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	36	23
Measles.. .. .	(3)	(2)
Whooping cough	(nil)	(4)
Diarrhoea	(9)	(26)
Vaccination (see page 14).		

GENERAL SANITATION.

Water of good quality, though usually tinged with peaty discolouration, is supplied by the Weardale and Consett Water Company.

Sewerage.—The new works are nearly completed. The following description is given :—The sewage flows from the sludge and detritus tanks by means of channels into a storm overflow arranged to run off into the storm water filter over three times the normal run of sewage and above that into the river. The sewage passing through this overflow into the Hydrolitic tank and thence through the Hydrolising bed will continue its course along a wrought steel tank on the mid-wall between the two clinker filter beds where it will be picked up by two travelling turbine distributors worked by the pressure of the distributed sewage on the air fitted with automatic reversing gear. After the sewage is thus distributed on the two filters or either of them at pleasure, the effluent will be collected at the north end of these tanks and then can be turned on to any part of the 22 acres of land set apart for treatment works. Passing on to the beds it filters through the land and is carried by means of underdrains at certain points into the river. A scheme for the efficient ventilation of the sewage system has also been devised and a series of vent shafts and Webb lamps are to be installed.

Housing.—(a) New Houses: 11 were built. (b) Insanitary Property: Notices were served with respect to seven houses, of which five were rendered habitable and two were closed. Systematic house to house inspections were made in the older parts of the town, and the report states :—“The chief structural
“defects found in dwelling-houses consist of defective walls and
“roofs, defective spouting and downcomers, dilapidated staircases,
“doors and windows, the latter in many instances not opening,
“and dilapidated ceilings. In all, 296 conditions of this kind were
“remedied after notice.” Sixteen water-closets were substituted for ash-pit privies. Seventy-two yards were cemented out. House drains were disconnected from the sewers in 32 instances; more improvements of this nature are urgently required. Referring to the Housing, Town Planning, &c., Act, Dr. Vann states :—“It
“will be seen that Part I. at least very nearly concerns us, and I
“would suggest that it receive very early and thorough consideration
“by the Health Committee.”

Nuisances.—1,455 were abated; 1,560 informal and 100 formal notices were served.

Common Lodging Houses (9) were inspected regularly. Four notices were necessary to enforce cleanliness, &c.

Cowsheds (10) were, as a rule, found satisfactory. Two notices were served to enforce cleanliness. The appointment of a veterinary inspector is to be considered.

Slaughter-houses (14) were inspected regularly to secure thorough cleansing after slaughtering. A portion of a tuberculous carcase was seized and destroyed.

Food and Drugs.—35 samples were analysed. In two instances the analysis was unsatisfactory, and the vendors were cautioned.

Workshops (176), and *Bakehouses* (10) were inspected on 425 occasions. Sixty-seven notices were served with respect to 69 nuisances, all of which were remedied.

SANITARY REQUIREMENTS.

None mentioned.

HARTLEPOOL.

J. RAWLINGS, M.R.C.S., Medical Officer of Health.

Vital Statistics

	1909.	1908.
Estimated Population	24,000	24,000
Birth-rate.... ..	25·83	29·29
Death-rate	13·37	14·75
Zymotic death-rate	0·91	1·41
Phthisis death-rate	0·58	0·95
Total Tuberculosis death-rate	1·50	1·91
Respiratory diseases death-rate.. ..	2·45	2·25
Infant mortality-rate per 1,000 births.. ..	106	127

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	68	85
Smallpox	nil.	nil.
Scarlet fever	52	64
Diphtheria	10	9
Fevers (Enteric, &c).	nil.	4
Puerperal fever.. ..	nil.	nil.
Cases treated at hospital ..	7	6
Measles	(15)	(4)
Whooping cough	(1)	(5)
Diarrhœa	(4)	(17)

GENERAL SANITATION.

Water was abundant, and of good quality; 3 samples were analysed.

Sewerage.—The sewerage system and the refuse destructor acted satisfactorily.

Housing.—(a) New Houses: 2 were built and occupied. (b) Insanitary Property: 4 houses were closed as unfit for habitation, and 10 houses were closed by the Corporation on the expiration of their leases. Ten of the most insanitary houses in the Borough were purchased by a private firm and demolished. Dr. Rawlings says:—"During the year a fair sanitary improvement has been effected. The housing question and closing of insanitary dwellings is still, in my opinion, the most important factor with regard to the improvement of the health of the Borough." Water-closets have been substituted for midden-privies throughout the district, except for a few outlying houses.

Nuisances.—405 were abated.

Common Lodging-houses were inspected regularly. One case of infectious disease (scarlet fever) occurred and was removed.

Dairies, Cowsheds, and Milkshops.—There are 37 vendors of milk, but only 2 cow keepers and 2 dairies in the districts. The supply was satisfactory.

Slaughter-houses (37) were maintained satisfactorily.

Food and Drugs.—73 samples were analysed. None were found to be adulterated.

SANITARY REQUIREMENTS.

Improvements in the housing accommodation.

JARROW-ON-TYNE.

J. M. NICOLL, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	34,815	34,700
Birth-rate	29·41	33·40
Death-rate	16·60	16·13
Zymotic death-rate	1·37	1·47
Phthisis death-rate	1·26	1·41
Total Tuberculosis death-rate	2·27	2·04
Respiratory diseases death-		
rate	4·19	2·68
Infant mortality-rate per 1,000		
births	148	130

Infectious Diseases—Cases & (Deaths).

	1909.	1908
Total notifications	126	101
Smallpox	nil.	nil.
Scarlet fever	27	40
Diphtheria	27	24
Fevers (Enteric, &c.)	16	8
Puerperal fever.. .. .	2	nil.
Cases treated at hospital ..	28	33
Measles.. .. .	(12)	(8)
Whooping cough	(20)	(4)
Diarrhoea	(5)	(32)

GENERAL SANITATION.

Water is satisfactorily supplied by the South Shields and Sunderland Water Company.

Sewerage.—The sewers acted efficiently. There are four outfalls into the Tyne and three into the Don.

Scavenging was done satisfactorily by contractors. The refuse is carried out to sea.

Housing.—(a) New houses: 10 self-contained and 5 tenemented houses (10 flats) were built. (b) Insanitary Property: 14 dwellings were dealt with under the H.W.C. Act; 4 were reconstructed, and the remainder were rendered habitable. Dr Nicoll says:—“The house accommodation is on the whole satisfactory and adequate, and with few exceptions quite fit for habitation. “Owing to the macadamising of our back lanes, the surroundings of some of the most congested parts of the town have been much improved. These lanes are much more easily scavenged and do not harbour dirt, refuse and damp, as the old cobble stones did. “On the whole, the conditions, in and about the houses themselves, have in recent years improved, there not being the same difficulty with dirty and badly kept yards as there used to be. “This has no doubt been prompted by doing away with most, if

“not all, of the badly bricked, or otherwise defective yards and
“cement substituted. The last of the privy-middens were
“abolished. Fifteen yards were cemented.”

Nuisances.—1,128 were abated; 1,126 informal, and 52 formal notices were served.

Streets.—The macadamising of the back streets in certain localities is required.

Milkshops (70), *Dairies* (5) were kept in good order. There is only one cowshed in the district.

Common Lodging-houses.—Dr. Nicoll says:—“There are
“eleven of these in the borough. During the year they were
“inspected by the Borough Surveyor and myself, and a report
“thereon was laid before the Sanitary Committee. In the course
“of our inspection it was very evident that some of these houses,
“owing to their very dirty condition, faulty construction, bad
“supervision, and various other defects, were totally unfit for the
“purpose. As a consequence a special committee was appointed,
“which is now dealing with the matter.”

Food and Drugs.—Forty-six samples were analysed, and one sample of milk was found to be unsatisfactory and proceedings were taken against the vendor. A butcher was fined £5 and costs for exposing for sale a carcase of beef seriously affected with tuberculosis.

Factories and Workshops (51) were found satisfactory except in two instances, where the defects have since been remedied.

SANITARY REQUIREMENTS.

- 1.—Macadamising of the back streets.
- 2.—Hospital accommodation for diphtheria.

STOCKTON.

THOMAS HORNE, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	53,660	54,242
Birth-rate	26·48	31·11
Death-rate	14·03	17·51
Zymotic death-rate	1·24	2·72
Phthisis death-rate	0·83	1·21
Total Tuberculosis death-rate	1·97	2·24
Respiratory diseases death-		
rate	2·01	2·54
Infant mortality-rate per 1,000		
births	121	150

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	312	243
Smallpox	nil.	nil.
Scarlet fever	136	87
Diphtheria	102	79
Fevers (Enteric, &c.)	24	34
Puerperal fever.. .. .	2	6
Cases treated at hospital ..	232	160
Measles	(31)	(69)
Whooping cough	(13)	(32)
Diarrhœa	(18)	(28)

Notification of Births Act and infant mortality (see page 9). Enteric fever attributed to the consumption of infected shell fish (see page 22).

GENERAL SANITATION.

Water was satisfactorily supplied by the Tees Valley Water Board. “A proportion of the water is passed through sand “filters.”

Sewerage.—849 lineal yards of sewers with 12 manholes and one flushing shaft were laid. The sewage is discharged into the river Tees.

Scavenging.—The ashpit privies are scavenged at night time, other refuse is removed during the day time. The destructor deals with all the refuse except some of the night soil which is disposed of to farmers.

Housing.—(a) New Houses: 142 were built. A table is given in the report showing that

(a) Every house built during the year is provided with a water-closet.

(b) That no new midden privies, or pan privies, were constructed.

(c) That an increasing proportion of the new houses are provided with an ash receptacle of moderate dimensions (mainly patent tippers) to the exclusion of fixed ashpits of huge size such as were formerly in vogue, and

(d) That a larger proportion of the new houses than in any previous year are provided with baths.

(b) *Insanitary Property*: 4 houses were closed. 204 defective yards were repaved or repaired and 202 water-closets were substituted for 186 privies, 13 pan privies and 3 slop-closets. Dr. Horne states:—"About one third of the houses in the Borough are provided with water-closets, while the remaining two-thirds are served by some other sort of convenience. This other sort of convenience in about 6,579 instances is that dangerous and disgusting arrangement—a midden privy, while in about 449 instances it is a pan privy."

In 43 instances it is still necessary to take the night soil through the house.

Nuisances.—2,946 were abated. 585 first notices and 72 final notices were served.

Streets.—9 streets and 10 back streets were taken over; and 13 streets and 11 back streets were sewered, levelled and paved, &c.

Common Lodging-houses (19).—Dr. Horne says:—"In respect to their relationship with public health and as agents of advanced civilization, Common Lodging-houses may be divided into two classes, viz., good and bad. I am afraid that by no stretch of imagination can the institutions in your district be placed in the former category. A special committee appointed by the Council two years ago in giving expression to its opinion after visiting the common Lodging-houses said, *inter alia*—"Speaking generally, the kitchens or living rooms of the whole

“of the Lodging-houses are very dark, uninviting, and in many cases dirty and unwholesome.’ It is quite safe to say this is just as true to-day as it was on the day it was written.”

Two keepers were summoned for breach of the bye-laws.

Slaughter-houses (29).—Most of the premises are close to dwellings and are of poor design and construction. “In many instances offal is not removed frequently enough, neither are the receptacles for offal themselves kept clean as they should be when not in use.” One person was fined for “not keeping his slaughter-house in a clean condition after slaughtering.”

Milk Supply (*Milk-sellers* (201), *Cow-keepers* (38)).—Only 16 cow-keepers have their cowsheds located within the district. Dr. Horne calls attention to the need for greater cleanliness with respect to both milkers and cows.

Foods and Drugs.—20 samples consisting of milk 10, butter 3, lard 1, &c., were analysed. One sample of milk contained 6·5 per cent. of added water and samples of tincture of opium and paregoric were both deficient in extractive matter. 4 carcasses of beef, 2 beast’s livers, 30 chickens were voluntarily surrendered.

Factories (51), *Workshops* (163), *Workplaces* (75), *Domestic Workshops* (48), and *Bakehouses* (53) were inspected on 288 occasions. Forty-four nuisances were detected of which 36 were remedied. Eight lists referring to 9 out-workers were received and 6 inspections were made.

SANITARY REQUIREMENTS.

None mentioned

URBAN DISTRICTS.

ANNFIELD PLAIN.

T. BENSON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	16,200	15,800
Birth-rate	36·04	36·83
Death-rate	13·45	15·37
Zymotic death-rate	1·60	2·78
Phthisis death-rate	0·61	0·31
Total Tuberculosis death-rate	1·29	0·69
Respiratory diseases death-rate.. .. .	2·59	2·02
Infant mortality-rate per 1,000 births	113	142

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	118	103
Smallpox	nil.	nil.
Scarlet fever	80	
Diphtheria	15	15
Fevers (Enteric, &c.)	12	14
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	58	52
Measles.. .. .	(4)	(nil.)
Whooping cough	(nil.)	(7)
Diarrhoea	(13)	(26)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The whole of the district is well sewered. The Dipton works have been considerably extended to deal with the South Medomsley sewage. Regarding the other works for the district, which are situated at Kyo, Dr. Benson says:—“At the “present time, the sewage is only partially purified, and is in a “state of fermentation when it passes out of the works. It is “arrested at two depressions at Harperley, causing considerable “unpleasantness, due to the smell at both receptacles. It is to be “hoped that your Board will use more expedition to have the “enlargement of the works completed.”

Scavenging is done by Contractors. The contract stipulates for effectual cleansing at least once a week.

Housing.—(a) New Houses: 114 self-contained and 2 tenemented houses were built. Forty-five of the houses were provided with water-closets. (b) Insanitary property: 22 houses were closed, of which 16 were wooden erections situated at South Pontop. The report calls attention to a considerable amount of seriously-defective property. It is mentioned that improvements have been effected to a number of cottages at White-le-Head, Greencroft, and South Pontop. Eight water-closets and 31 ash-closets were substituted for ashpit privies. A large number of notices were served on owners of property in Flint Hill, Hill Top, Dipton, and Kyo Districts, “but the number of improvements and “remedies carried out is not as great as it should be.” The report also calls attention to the very insanitary conditions existing at Lily Cottages (wooden huts), Dowlais Cottages (no back door and insanitary out-offices), Edwards’ Buildings, Beatties’ Houses, and Weston’s Houses (defective generally and unfit for habitation).

Milk Supply.—“In most instances the byres are satisfactory, “and the cows are not entirely stall-fed.”

Slaughter-houses (10) were well maintained.

Factories (9) and *Workshops* (21) were inspected on 60 occasions and found satisfactory.

SANITARY REQUIREMENTS.

1.—Improvements to the housing accommodation.

2.—Acceleration of the work of extending the Kyo sewage disposal works.

BARNARD CASTLE.

ALFRED H. SEVIER, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	4,572	4,684
Birth-rate	21·21	23·27
Death-rate	14·65	17·07
Zymotic death-rate	0·65	0·85
Phthisis death-rate	1·53	1·25
Total Tuberculosis death-rate	1·75	1·70
Respiratory diseases death-rate.. .. .	1·53	2·13
Infant mortality-rate per 1,000 births	92	91

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	21	9
Smallpox	nil.	nil.
Scarlet fever	2	3
Diphtheria	16	nil
Fevers (Enteric, &c.)	1	3
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	3	nil.
Measles	(1)	(nil.)
Whooping cough	(nil.)	(2)
Diarrhoea	(1)	(1)

Lowest birth-rate in the County (see page 4).

GENERAL SANITATION.

Water Supply was satisfactory.

Sewerage.—A new drainage system was laid down at the workhouse. In the lower part of the town improvements are required to the sewerage system to prevent occasional flooding. The sewage farm worked efficiently.

Housing.—(a) New houses: 9 were built. (b) Insanitary Property. The report contains no detailed information, but Dr. Sevier states that:—“Assisted by your Inspector, I have continued
“my house-to-house inspection of the town, our object being to
“detect and report to you any case of sanitary defect, or over-
“crowding, particularly in the tenemented houses occupied by
“the working class population. As a result of this inspection, I
“had occasion to recommend you to close twenty-one houses
“owing to their unfitness for human habitation on account of
“structural and sanitary defects or of overcrowding. I also
“brought to your notice several instances of foul and unsanitary
“privy middens, and recommended that these be converted into
“W.C.’s, and that these latter be increased in number where
“found to be inadequate. I am glad to say that steps have been
“and are being taken in order to carry these recommendations
“into effect.”

Nuisances.—92 out of 94 nuisances reported were remedied.

Milk Supply.—There are four cow-sheds in the district. Two are overcrowded and defectively ventilated.

Slaughter-houses (8).—Most of them were maintained satisfactorily. Four premises require improvement.

Factories, Workshops (21) *and Outworkers* (4) were inspected on 39 occasions. No defects are reported.

SANITARY REQUIREMENTS.

1.—Improvements to the sewerage system in the low part of the town to prevent occasional flooding.

2.—Improvements to cowsheds and slaughter-houses.

3.—Provision of a disinfecter capable of dealing with large articles.

BENFIELDSIDE.

WM. ALLEN, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	7,700	7,650
Birth-rate	33·37	32·28
Death-rate	16·23	18·69
Zymotic death-rate	1·30	2·48
Phthisis death-rate	1·42	1·30
Total Tuberculosis death-rate	2·85	1·56
Respiratory diseases death-rate	1·56	2·48
Infant mortality-rate per 1,000 births	81	174

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	31	23
Smallpox	nil.	nil.
Scarlet fever	15	2
Diphtheria	2	7
Fevers (Enteric, &c.)	2	7
Puerperal fever	nil.	nil.
Cases treated at hospital ..	13	6
Measles	(2)	(1)
Whooping cough	(3)	(9)
Diarrhoea	(5)	(9)

GENERAL SANITATION.

Water was supplied satisfactorily by the Weardale and Consett Water Company.

Sewerage.—Extensions to the sewerage disposal works are under consideration.

Scavenging is undertaken by Contractors, and the work is now done more systematically than formerly.

Housing.—(a) New Houses: 41 were occupied during the year. (b) Insanitary Property: 2 houses were closed and 2 houses, situated in a congested area, were demolished to make room for ash-closets. Referring to the housing of the district Dr. Allen says:—
 “There are a large number of houses of what may be called the
 “Bottle Bank type consisting of an upper and lower room connected
 “by a step-ladder; the upper room having no chimney and only
 “one window. These houses exist in Bottle Bank, Walton’s Row,
 “West Row, and Wood Street. They are nearly all capable of
 “improvement, and if their owners do not undertake their improve-
 “ment soon I shall be obliged to recommend that they be
 “permanently closed.” . . . Eight ash-closets and 1 water-
 closet were substituted for ash-pit privies.

Nuisances.—70 informal notices were served with satisfactory results.

Dairies and Cow-sheds were maintained satisfactorily.

Slaughter-houses.—Dr. Allen states:—“The slaughter-houses
 “are the private property of the individual butchers. They have
 “been inspected regularly and in some cases whitewashing had to
 “be ordered by your Inspector. There is no systematic inspection
 “of meat and this can only be efficiently performed by having a
 “public abattoir in or near your district. In that case the present
 “slaughter houses would be closed and the butchers compelled to
 “use the abattoir. It might be well if your Council would
 “approach neighbouring Councils on the matter of a joint abattoir.
 “This could be conveniently built at a point equidistant, from
 “Leadgate, Consett, and Blackhill. In the interests of the
 “public health an inspection of every carcase is necessary to
 “prevent tuberculosis.”

Factories (3), *Workshops* (18), were inspected on 90 occasions and found satisfactory. One underground bakehouse was licensed

The report contains no reference to sewerage, streets, or common lodging-houses.

SANITARY REQUIREMENTS

1.—A public slaughter-house.

2.—Inspection of dairy cows by a veterinary surgeon.

3.—Demolition or the reconstruction of houses of the “Bottle Bank” type.

BISHOP AUCKLAND.

T. A. McCULLAGH, M.R.C.S., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	13,306	13,136
Birth rate	31·41	33·03
Death-rate	17·13	17·05
Zymotic death-rate	0·90	1·97
Phthisis death-rate	1·12	0·83
Total Tuberculosis death-rate	1·87	1·59
Respiratory diseases death-rate.. .. .	2·40	2·20
Infant mortality-rate per 1,000 births	117	126

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications.. .. .	89	121
Smallpox	nil.	nil.
Scarlet fever	27	65
Diphtheria	18	22
Fevers (Enteric, &c.)	18	20
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	16	27
Measles.. .. .	(nil.)	(1)
Whooping cough	(2)	(5)
Diarrhoea	(6)	(17)

GENERAL SANITATION.

Water.—Three filter beds are in use at the Council’s Water-works. The supply was good and ample.

Sewerage.—The new scheme for the disposal of the sewage has been approved by the Local Government Board, and will shortly be proceeded with.

Scavenging was efficiently done. Dr. McCullagh says :—“The
“more water-closets we have, and the fewer privies and ash-closets,
“the better for our health, especially in the hot summer and
“autumn.”

Housing.—(a) New houses : 84 were erected, and 67 occupied.
(b) Insanitary property : “Most of the insanitary property of the
“town is old and difficult to deal with, more especially the Town
“Head, Skeleton Row, some of Back Bondgate, and Finkle Street.
“Improvements are being carried out in South Terrace, numbers
“14 to 24, upon which I specially reported to the Board ; but in
“other parts some of the houses are almost past improvement,
“and might with advantage be closed.”

Five houses were dealt with under the H.W.C. Act, and one house has since been rendered habitable. Forty yards were cemented ; 49 privies and 28 ash-pits were abolished. Water-closets in 35 instances and movable ashtins in 24 instances were installed.

Nuisances.—Twenty-seven informal and 96 formal notices were served ; 50 nuisances were abated.

Common Lodging-houses were maintained satisfactorily. Miller’s common lodging-house has been struck off the register. The premises were unsuitable.

Slaughter-houses were maintained satisfactorily.

Workshops (66).—Fifty-two inspections were made ; defective conditions due to uncleanness (5) and inefficient sanitary accommodation (2) were remedied.

SANITARY REQUIREMENTS

None mentioned.

BLAYDON.

H. MORRISON, M.B., B.S., B.Hy., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	28,000	26,357
Birth-rate	40·32	41·35
Death-rate	13·50	15·51
Zymotic death-rate	1·53	3·41
Phthisis death-rate	1·14	0·49
Total Tuberculosis death-rate	1·82	0·79
Respiratory diseases death-rate.. .. .	1·35	2·42
Infant mortality-rate per 1,000 births	117	159

High birth-rate (see page 4).

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	277	175
Smallpox	nil.	nil.
Scarlet fever	184	63
Diphtheria	54	45
Fevers (Enteric, &c.)	20	49
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	187	112
Measles.. .. .	(5)	(5)
Whooping cough	(1)	(22)
Diarrhoea	(22)	(58)

GENERAL SANITATION.

Water is satisfactorily supplied by the Newcastle and Gateshead and the Weardale and Consett Water Companies.

Scavenging required considerable supervision, more especially in the Blaydon and Winlaton districts.

Housing.—Insanitary property: 17 houses were dealt with under the H.W.C. Acts, and, as a result, 6 were rendered habitable, 8 were closed, and 3 are being dealt with. Action was also taken with respect to 8 houses at Barlow, and the owner has agreed to render them habitable. Nine cases of overcrowding and 12 houses in a foul condition were dealt with. Twenty-two privy middens were abolished; 18 water-closets and 22 ash-closets were built.

Nuisances.—1,444 were abated.

Common Lodging-houses (2).—Seven notices were served to secure lime-washing and ventilation.

Dairies and Milkshops.—Two notices were served for lime-washing.

Slaughter-houses (17).—Three notices were served to enforce cleanliness.

Factories and Workshops.—Seventy-three inspections were made. Five nuisances were abated (insufficient sanitary accommodation).

SANITARY REQUIREMENTS.

1.—Stricter bye-laws with regard to foundations of new houses on “made” ground.

2.—Provision of water-closets in all new houses and in old houses where ash-closets are defective or ashpit-privies are being abolished.

3.—An Assistant Sanitary Inspector.

BRANDON AND BYSHOTTLES.

HENRY SMITH, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>				<i>Infectious Diseases—Cases & (Deaths.)</i>			
	1909.	1908.			1909.	1908.	
Estimated Population	18,297	17,293		Total notifications	326	225	
Birth-rate	34·86	36·93		Smallpox	nil.	nil.	
Death-rate	14·42	17·85		Scarlet fever	262	162	
Zymotic death-rate.. .. .	1·09	3·06		Diphtheria	26	31	
Phthisis death-rate	0·87	0·66		Fevers (Enteric, &c.)	28	20	
Total Tuberculosis death-rate	1·25	1·84		Puerperal fever.. .. .	nil.	nil.	
Respiratory diseases death-				Cases treated at hospital ..	109	80	
rate	2·51	3·45		Measles.. .. .	(nil)	(13)	
Infant mortality-rate per 1,000				Whooping cough	(2)	(4)	
births	123	191		Diarrhoea	(10)	(23)	

Notification of Births Act and Infant Mortality (see pages 9 and 10).

GENERAL SANITATION.

Water.—The Weardale and Consett Water Company supply the whole district with the exception of a few farms and isolated places.

Sewerage.—600 yards of 9 inch sewers were laid for the connection of Brandon Colliery village with the Littleburn sewage works which now deal with the whole of the sewage from Station Avenue, South Street, East Street, &c. Additional secondary filters have been laid down at the Littleburn works and the effluent obtained is reported to be good. Extensions are required to the Lymington Terrace sewage works.

Scavenging was fairly satisfactorily carried out by contract, though it was necessary to serve 63 notices on the contractors (14 in number) during the year. The refuse is deposited at the Council's tips or is used as manure.

Housing.—(a) New houses: 17 were built during the year, but no additions have been made to Brandon Colliery. Plans for a street of 17 houses at Esh Winning have been deposited. (b) *Insanitary Property:* Proceedings were taken against the owners of the houses in School Street and a magistrate's order was obtained requiring the provision of ash-closets and the cementing of the yards. The report states that the carrying out of these improvements has been delayed pending an agreement between the lessors and lessees of this property being arrived at. Cement pavement was laid down in 41 yards and 228 new ash-closets were erected—at New Braucepeth (50), Brandon Colliery (60), Meadowfield and Langley Moor (75), Waterhouses (28), and Browney (15).

Nuisances.—443 were abated 365 notices were served.

Streets.—Two streets were made at Langley Moor, and plans have been prepared for three others at Brandon Colliery. Flagged footpaths have been laid in Commercial Street, Brandon Colliery.

Dairies and Cowsheds were all inspected, 9 were defective in respect of cleanliness and one byre was found to require reconstruction. Notices were served and the nuisances abated.

Slaughter-houses were maintained fairly satisfactorily. Dr. Smith states that:—"There are a few cases where the slaughter-house is badly situated, being too near dwelling houses, and

“ where the killing is done either in the shop or in close proximity
 “ thereto. Such arrangements are neither desirable nor up to
 “ date, and have attached to them many disadvantages, disad-
 “ vantages which can be best overcome by the erection of *Public*
 “ *Abattoirs*.”

Factories (6), *Workshops* (20), *Bake-houses* (1).—31 inspections made; 7 nuisances detected and abated.

There are no common lodging-houses and no tenemented property in the district.

SANITARY REQUIREMENTS.

Additional hospital accommodation.

CHESTER-LE-STREET.

D. DUNCAN, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	15,174	—
Birth-rate	33·37	—
Death-rate	12·98	—
Zymotic death-rate	1·84	—
Phthisis death-rate	0·39	—
Total Tuberculosis death-rate	0·93	—
Respiratory diseases death- rate	2·04	—
Infant mortality-rate per 1,000 births	115	—

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	74	—
Smallpox	nil.	—
Scarlet fever	49	—
Diphtheria	8	—
Fevers (Enteric, &c.)	10	—
Puerperal fever.. .. .	nil.	—
Cases treated at hospital ..	23	—
Measles.. .. .	(5)	—
Whooping cough	(6)	—
Diarrhoea	(10)	—

GENERAL SANITATION.

Water is satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The Chester-le-Street works show some improvement but require to be underdrained in parts. Various schemes are suggested for the treatment of the sewage of Pelton Fell Village. 413 yards of new sewers were laid down at Chester-le-Street (373) and Pelton Fell (40).

Housing.—The report reviews briefly the housing accommodation of the district. The improvements effected during the year included the conversion of 73 ash-pit privies, the cementing of 7 yards and the drainage of 13 houses in Chester-le-Street, and at Pelton Fell the conversion of the single houses in Pit Rows, into four-roomed houses and the erection of a number of ash-closets, &c. A number of improvements are required at Pelton Fell. Notices were served with respect to three houses unfit for habitation at Gilbert's Corner and the owner has agreed to their closure. Six houses at Low Howlett require considerable repairs to prevent dampness and over 200 houses require conveniences of a modern type.

Streets.—Improvements are required in all parts of the district.

Common Lodging-houses (2) are maintained fairly clean but are overcrowded.

Dairies, Cowsheds (7), *Milkshops* (4).—The cowsheds are described as “good, bad, and indifferent.”—Attention is called to defective conditions (overcrowding and accumulation of manure) in premises situated in Edward's Square.

Slaughter-houses (9).—Are likewise stated to be “good, bad, and indifferent.”

Factories (6), *Workshops* (31), *Workplaces* (28)—were inspected on 140 occasions; 2 notices were served to enforce ventilation (1), drainage (1), and provision of sanitary accommodation (2) with satisfactory results.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation, conveniences and yards as detailed in the report.
- 2.—Improvements to the streets.
- 3.—Provision of a joint smallpox hospital for the Union.

CONSETT.

A. D. M. MACINTYRE, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	11,157	10,969
Birth-rate	28·86	33·91
Death-rate	16·31	17·32
Zymotic death-rate	1·25	2·00
Phthisis death-rate	0·89	1·45
Total Tuberculosis death-rate	1·43	2·27
Respiratory diseases death-rate	3·04	2·64
Infant mortality-rate per 1,000 births	121	201

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	30	13
Smallpox	nil.	nil.
Scarlet fever	15	2
Diphtheria	2	5
Fevers (Enteric, &c.)	nil.	3
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	1	5
Measles	(4)	(nil.)
Whooping cough	(6)	(6)
Diarrhœa	(4)	(15)

GENERAL SANITATION.

Water is supplied by the Weardale and Consett Water Company.

Sewerage.—The sewage was satisfactorily treated (land irrigation) at Stannifordam and the subsidiary works at Crookhall (four rough and four fine filters). A new main sewer to connect the Templetown and Blackhill portions of the district to the irrigation works is being laid.

Scavenging was satisfactorily done by the Council's workmen.

Housing.—(a) New Houses : Plans for 126 houses were passed, 67 were built, and 25 are in course of erection. (b) Insanitary Property : 6 cottages in the Company Rows have been reconstructed so as to provide good cottages with one bedroom ;

staircases and stairhead lights have been inserted, and a pantry and coalhouse have been added. Twenty cottages are in hand at the present time, and similar improvements will be made to the remainder. There are altogether 173 cottages which require to be reconstructed. Alterations to the back-to-back houses in John Street and Pitt Street have to a large extent been carried out. The houses have been converted into through four-roomed houses and w.c.'s have been substituted for ashpit privies. Further improvements to this property are still required. The congested areas occupied by Nos. 1 to 12 Pitt Street and 5 to 16 Trafalgar Street are to be dealt with at an early date. The cottages are to be reconstructed, new conveniences, coal-houses, and pantries are to be provided and the common yards are to be cemented.

Nuisances.—Two formal and 84 informal notices were served and complied with.

Streets.—The report states :—“Several new streets were constructed and extensive improvements to various existing streets were effected, in the course of which 14,000 square yards of tar macadam were laid down, the intention being to gradually extend this work to the whole of the streets in the town. Both from a standpoint of economy and sanitary efficiency this form of impervious street-making is to be specially commended.”

Common Lodging-houses (4) were maintained satisfactorily.

Dairies and Cowsheds (6) were maintained satisfactorily. The greater part of the milk is imported from the Lanchester Rural District.

Slaughter-houses (12) are registered and were regularly inspected.

Factories (14) and *Workshops* (46) were inspected on 63 occasions and found satisfactory.

SANITARY REQUIREMENTS.

None mentioned.

CROOK.

A. MACKAY, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	11,800	11,800
Birth-rate	34·91	34·40
Death-rate	12·96	17·87
Zymotic death-rate	0·92	2·37
Phthisis death-rate	1·10	0·67
Total Tuberculosis death-rate	1·86	1·35
Respiratory diseases death-rate.. .. .	2·37	3·64
Infant mortality-rate per 1,000 births	92	155

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	88	73
Smallpox	nil.	nil.
Scarlet fever	73	23
Diphtheria	2	21
Fevers (Enteric, &c.)	5	23
Puerperal fever.. .. .	nil.	2
Cases treated at hospital ..	42	28
Measles.. .. .	(1)	(nil.)
Whooping cough	(nil)	(7)
Diarrhoea.. .. .	(7)	(13)

GENERAL SANITATION.

Water was supplied by the Weardale and Consett Water Company to the whole district with the exception of a few outlying farms. The supply is ample and of excellent quality.

Sewerage.—A new sewer was laid from Woodfield to Mown Meadows. Small filtering tanks were constructed at Mount Pleasant for the treatment of sewage from the N.E.R. Co.’s cottages. A scheme for the disposal of the Stanley Pit Sewage is under consideration.

Scavenging was done fairly satisfactorily by the Contractors. The contract stipulates for the emptying and disinfection of all privies and ashpits once a week. The tips at Crook are no longer used. The refuse is disposed of to farmers for manure.

Housing.—(a) New Houses: 27 were built and 26 others are in course of erection. (b) Insanitary Property: The improvements effected include (1) repairs to the Wood Houses, (2) Cementing of yards (20), (3) Substitution of ashclosets for ashpit privies (59). Dr. Mackay says:—“The greatest blot on the district is the comparatively large number of midden privies, which I am sure from long observation are the chief cause of Typhoid Fever and Diarrhoeal diseases which so often prevails in Colliery

“Villages where these structures are in use, and I much regret that their removal in Crook proceeds so slowly. In Crook itself there were at the middle of the year 248; ashclosets were substituted for 21 during the year, so that at the present rate of progress it will take 10 years before they are abolished.”

Streets.—The road at Whitwell Terrace has been made and plans have been prepared for making three back streets and one cross street.

Dairies and Cowsheds.—All the milk is distributed direct from the farms. Three new cowsheds were built. Every cowshed in the district was visited, in some instances the cows were in a “filthy state.”

Slaughter-houses (19) are registered and were inspected regularly. Reference is again made to some unsatisfactory premises in Hope Street and another near Rosemount Terrace requires improvement. Dr. Mackay says:—“As previously pointed out nearly all the slaughter-houses are in close proximity to dwelling-houses, and I am quite sure a public slaughter house would be a great improvement.”

Factories (15), *Workshops* (28), and *Outworkers* (1) were inspected on 44 occasions. Four nuisances were detected. Attention is again directed to some unsatisfactory premises used as a lemonade factory.

SANITARY REQUIREMENTS.

1.—Careful and thorough disinfection of all infected dwellings, clothing and bedding.

2.—Frequent inspection of Cowsheds.

3.—Rapid abolition of midden privies especially in Crook.

4.—Frequent flushing of drains and washing of yards in summer months.

FELLING.

WM. E. PEACOCK, M.D., B.Hy., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	27,622	26,940
Birth-rate	29·57	33·18
Death-rate	13·97	15·88
Zymotic death-rate	1·33	2·04
Phthisis death-rate	1·08	0·89
Total Tuberculosis death-rate	2·02	3·97
Respiratory diseases death-rate	2·75	3·00
Infant mortality-rate per 1,000 births	143	140

Infectious Diseases—Cases & (Deaths).

	1909	1908.
Total notifications	279	173
Smallpox	nil.	nil.
Scarlet fever.. .. .	216	132
Diphtheria	21	18
Fevers (Enteric, &c.).. .. .	12	8
Puerperal fever	1	2
Cases treated at hospital	nil.	nil.
Measles	(13)	(2)
Whooping cough.. .. .	(3)	(14)
Diarrhoea	(11)	(30)

High death-rate among illegitimate children (see page 12).

Compulsory notification of Phthisis recommended (see page 33).

GENERAL SANITATION.

Water is satisfactorily supplied by the Newcastle and Gateshead Water Company.

Sewerage.—The sewage is discharged directly into the Tyne.

Scavenging was satisfactorily done by the Council's own workmen. The destructor worked well and dealt with 8,503 tons of refuse. 10,465 loads of refuse were disposed of to farmers or deposited on the tip. Dr. Peacock says:—"I should like your Council to consider the advisability of having all ash-closets cleansed during the night in the summer season and if possible, also in late spring and early autumn. It is unnecessary almost to point out how objectionable a full Council cart is, on a hot summer day, in a main thoroughfare; nor is it any less so if there happens to be a gentle breeze which detaches some portion of its lighter contents and deposits them in close proximity to pedestrians."

Housing.—(a) New houses: 87 self-contained and 15 tenemented (flats) houses were built. (b) Insanitary Property: 28 houses were dealt with under the H.W.C. Act; 2 houses were

closed voluntarily; 4 one-roomed tenements were converted into 2 two-roomed houses; improvements are under consideration for the remainder of the houses. Ten houses were demolished—at Mulberry Place (5) at Windy Nook (5). Thirty-five midden privies were replaced by 53 ash-closets and 5 water-closets. Since the year 1902, 649 midden privies have been abolished and replaced by 1,129 conveniences of a more modern type. Amongst other improvements effected (noted in the report of the inspector which is appended) were the provision of sculleries (15), pantries (12), cement floors (16), and cement yards (10).

Nuisances.—15 formal and 340 informal notices were served, and 343 nuisances were abated.

Dr. Peacock calls attention to the frequency with which slops and other refuse are deposited in the street channels and recommends that one or two offenders should be prosecuted. The practice indulged in by householders of shaking dusty rug mats in the street during the day is also censured.

Dairies and Cowsheds (17), and Milkshops (41).—One notice was served to enforce lighting and ventilation. Dr. Peacock states:—“The cow byres show a great improvement in the last year or two, several have been pulled down and rebuilt on modern lines, whilst in the case of older buildings improvements have been effected in lighting, ventilation, paving, and channelling. During the year it was found that one person was selling milk in the district without being registered. Notice was served on this person and the usual form was applied for and the milk-seller placed on the register.”

Slaughter-houses (19).—One quarter of unsound beef was destroyed. The license for some dilapidated premises was not renewed on the advice of the Medical Officer of Health. 5 notices were served to enforce limewashing (1), provision of receptacles for offal (2), repairs to floor (1), renewal of gully (1). Dr. Peacock again recommends the provision of a public slaughter-house.

Factories (7), *Workshops* (42), *Workplaces* (11) and *Outworkers* (3) were all inspected. Three nuisances (insufficient sanitary accommodation) were abated.

SANITARY REQUIREMENTS.

1.—The provision of a public slaughter-house.

2.—Night scavenging.

HEBBURN.

A. M. G. WALKER, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	23,577	23,577
Birth-rate	33·75	34·22
Death-rate	14·25	14·12
Zymotic death-rate	1·82	1·90
Phthisis death-rate	1·14	0·89
Total Tuberculosis death-rate	1·61	1·31
Respiratory diseases death-		
rate.. .. .	1·56	2·58
Infant mortality-rate per 1,000		
births	126	127

Infectious Diseases – Cases & (Deaths).

	1909.	1908.
Total notifications	133	126
Smallpox	nil.	nil.
Scarlet fever	50	50
Diphtheria	28	23
Fevers (Enteric, &c.)	16	8
Puerperal fever.. .. .	nil.	1
Cases treated at hospital ..	77	59
Measles.. .. .	(14)	(1)
Whooping cough	(12)	(13)
Diarrhoea	(8)	(25)

GENERAL SANITATION.

Water was supplied satisfactorily by the Sunderland and South Shields Water Company, from the Boldon reservoirs. Three wells, which are stated to yield good water, are also in use in the district.

Sewerage.—Flushing of the sewers and drains was carried out periodically.

Scavenging was done satisfactorily. The refuse was chiefly despatched to sea in hoppers, but some was disposed of on to land.

Housing.—(a) New Houses: 13 self-contained and 4 tenemented houses were built. (b) Insanitary Property: No detailed information is given. Dr. Walker states that:—“ Dr. Reece’s “(Local Government Board Inspector) report and recommendations

“have during the year received every consideration and attention.
 “Every endeavour has been made to deal with insanitary property
 “and over-crowding. Depression in trade and poverty in the
 “district have been a hindrance towards the Council taking any
 “drastic measures. The Local Government Board has accepted
 “the Council’s statements of the recommendations with one
 “exception, namely, the appointment of additional help in the
 “Health Department, and this I am pleased to say is now receiving
 “the Council’s careful consideration.”

Thirty ashpit privies were replaced by 55 ashclosets. There now remain only 118 ashpit privies in the district.

Nuisances.—220 informal and 33 formal notices were served, and 207 nuisances were abated.

Streets.—Dr. Walker states:—“The street improvements
 “have made satisfactory progress. The tar macadam has so far
 “proved satisfactory, it is certainly more sanitary and easier kept
 “clean than the old-fashioned cobble stone paving.”

Common Lodging-house.—(1) was maintained satisfactorily. There is need for additional lodging-houses in the district.

Dairies and Cowsheds (6) and Milkshops (34).—The Inspector of Nuisances, whose report is appended, states that “improvements have been effected to some of the cowsheds in drainage, lighting and ventilating; there are still others on which improvements could be made, and one which ought to be pulled down. There are 34 milkshops in the district, some of which are very good and others which are indifferent.”

Slaughter-houses (11) were periodically inspected. Two notices were necessary to enforce cleanliness. Dr. Walker recommends the provision of a public slaughter-house.

Workshops (11) were inspected on 24 occasions and 9 inspections were made of workplaces. Three nuisances notified by H.M. Inspector of Factories (defective sanitary accommodation) were remedied.

SANITARY REQUIREMENTS.

- 1.—A public slaughter-house.
- 2.—Improvements to cowsheds and milkshops.
- 3.—Appointment of Health Visitor.

HETTON-LE-HOLE.

J. ADAMSON, M.D., Medical Officer of Health.

Vital Statistics.			Infectious Diseases—Cases & (Deaths).		
	1909.	1908.		1909.	1908.
Estimated Population	14,800	14,600	Total notifications	52	186
Birth-rate	36·62	38·76	Smallpox	nil.	nil
Death-rate	13·85	16·43	Scarlet fever	24	134
Zymotic death-rate	1·75	3·28	Diphtheria	1	9
Phthisis death-rate	0·40	1·16	Fevers (Enteric, &c.)	8	29
Total Tuberculosis death-rate	1·01	1·43	Puerperal fever.. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at hospital ..	7	34
rate	2·09	2·53	Measles	(11)	(7)
Infant mortality-rate per 1,000			Whooping cough	(nil.)	(9)
births	112	136	Diarrhoea	(12)	(25)

GENERAL SANITATION.

Water Supply was “continuous and satisfactory.”

Sewage Disposal.—The bacteria beds were a “great success,” and their use rendered it possible to rest the land on the sewage farm.

Scavenging was done satisfactorily by contractors. Scavenging at night time during the summer weather has been abandoned.

Streets.—Houghton Road was made, and contracts for the making of three other streets have been let.

Dairies and Cowsheds.—The report states: “There have been “some improvements, and more care is exercised than formerly.

Slaughter-houses.—The provision of a public slaughter-house is again advocated.

The report is lacking information regarding sewerage, number of new houses built, improvements made or required to be made to the housing, nuisances abated, and inspections made of factories and workshops.

SANITARY REQUIREMENTS.

A public slaughter-house.

HOUGHTON-LE-SPRING.

D. S. PARK, F.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases & (Deaths).</i>		
	1909.	1908.		1909.	1908.
Estimated Population	9,800	9,725	Total notifications	61	88
Birth-rate	39·08	37·63	Smallpox	nil.	nil.
Death-rate	12·96	19·64	Scarlet fever	12	22
Zymotic death-rate	1·22	2·26	Diphtheria	14	10
Phthisis death-rate	1·12	1·13	Fevers (Enteric, &c.)	22	36
Total Tuberculosis death-rate	1·93	1·64	Puerperal fever.. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at Hospital ..	20	16
rate.. .. .	2·14	4·21	Measles.. .. .	(5)	(nil.)
Infant mortality-rate per 1,000			Whooping cough	(2)	(2)
births	99	191	Diarrhoea	(nil.)	(13)

GENERAL SANITATION.

Water.—Houghton Colliery furnishes the greater part of the supply. The report states:—“The continued partial failure of “the feeders at the Houghton Colliery has necessitated a steady “increase in the consumption from the Sunderland and South “Shields Water Company.

“The provision of this supply has been a boon to the district, “inasmuch as no shortage of supply has been experienced since “its installation, and had this supply not been available the town “must undoubtedly have been more or less without water on “many occasions for probably eight to ten days in succession.

Sewerage.—The sewage is purified by land irrigation. The area has been extended by 1,000 square yards by throwing two beds into one, and six of the beds have been under-drained with satisfactory results as regards the crops grown and apparently without deteriorating the effluent. Subsidences have again occasioned trouble at the works. It is recommended that Houghton Burn should be cleaned out to prevent a nuisance in summer and flooding in winter. Subsidences continue to cause much damage to the sewers, which have required constant flushing and repairs to make them work. The relaying of the sewers is to be deferred until there is more prospect of the subsidences ceasing.

Scavenging was fairly well done by contractors. Dr. Park states:—"The system of contract, however, even if somewhat cheaper, necessitates a great amount of supervision, as there is still the tendency on the part of the contractors to make this work form only a small part of their daily work, thus causing complaints and annoyance to the Council and its officers."

Considerable improvements are being made to premises where the scavenging used to involve fouling of the back streets. It is anticipated that the construction of a refuse destructor may be soon necessary because of the difficulty of obtaining suitable sites for tips.

Housing.—(a) New Houses : Plans for 13 dwelling-houses were passed and 13 houses were erected. (b) Insanitary Property : No information is given. The Lambton Colliery Company is reported to have commenced the work of abolishing ash-pit privies from their property.

Streets.—A number of the streets are in urgent need of attention. The D.C., after having plans and estimates prepared for the making of certain streets, have apparently delayed taking action for the insufficient reason that the owners have objected to the proposed schemes.

Common Lodging-houses (3) were well maintained. One lodging-house, situated in Gas House Lane, provides very satisfactory accommodation for 72 lodgers.

Dairies and Cowsheds were subjected to a special inspection in October, and were found satisfactory. Three farms were found to be dependent upon surface water, and steps are being taken to provide a suitable supply.

Slaughter-houses were well maintained, but Dr. Park again strongly protests against slaughtering being permitted in shops. He also regrets that the "humane" system of slaughtering has not been adopted more generally.

Factories and Workshops were "examined in the usual way." Two nuisances were detected, one of which was remedied. Tables of inspections are not given in the report.

SANITARY REQUIREMENTS.

The proper making up of all streets.

LEADGATE.

WM. ALLEN, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	4,800	4,800
Birth-rate	35·62	36·87
Death-rate	16·66	14·58
Zymotic death-rate	1·04	3·54
Phthisis death-rate	0·81	0·83
Total Tuberculosis death-rate	2·08	1·04
Respiratory diseases death-rate.. .. .	4·37	1·45
Infant mortality-rate per 1,000 births	163	141

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	11	8
Smallpox	nil.	nil.
Scarlet fever	7	3
Diphtheria	nil.	nil.
Fevers (Enteric, &c.)	nil.	3
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	3	1
Measles.. .. .	(1)	(nil.)
Whooping cough	(nil.)	(5)
Diarrhœa	(3)	(12)

High infant mortality (see page 7).

GENERAL SANITATION.

Water is satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The sewage works at Watling Street were damaged by subsidences, but they have been repaired and are now working satisfactorily.

Scavenging.—The report states:—"The owners remove all refuse themselves. It might be more systematically done if undertaken by your Council."

Housing.—(a) New houses: 12 were built. (b) Insanitary Property: 5 houses were reconstructed, 4 yards were cemented, water-closets were substituted for 4 privy middens.

Nuisances.—Three formal notices were served.

Streets.—The work of asphaltting footpaths and planting trees in the streets is proceeding.

Dairies and Cowsheds.—The dairies were well maintained. One byre was re-built and another is to be similarly improved.

Slaughter-houses.—The provision of a public slaughter-house is advocated, so as to facilitate the inspection of meat.

Factories (4), *Workshops* (13), and *Bakehouses* (1) were inspected on 42 occasions, and were found satisfactory.

SANITARY REQUIREMENTS.

1.—A public slaughter-house.

2.—Public scavenging.

RYTON.

JAMES W. SMITH, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	11,890	11,450
Birth-rate	37·84	35·98
Death-rate	12·19	12·75
Zymotic death-rate	0·92	2·35
Phthisis death-rate	0·58	0·43
Total Tuberculosis death-rate	1·51	1·13
Respiratory diseases death-		
rate	1·26	1·13
Infant mortality-rate per 1,000		
births	106	114

Infectious Diseases—Cases & (Deaths).

	1909.	1908
Total notifications	124	124
Smallpox	nil.	nil.
Scarlet fever	70	56
Diphtheria	38	42
Fevers (Enteric, &c.)	11	19
Puerperal fever.. .. .	1	1
Cases treated at hospital ..	34	33
Measles.. .. .	(1)	(nil.)
Whooping cough	(1)	(9)
Diarrhoea	(6)	(12)

Diphtheria in Schools (see page 17).

Compulsory notification of Phthisis recommended (see page 33).

GENERAL SANITATION.

Water was satisfactorily supplied by the Newcastle and Gateshead Water Company.

Sewerage.—The sewers are regularly cleansed and acted efficiently.

Scavenging was satisfactorily done.

Housing.—(a) New Houses: plans for 154 new houses were approved; 100 were occupied. Bye-laws regulating the erection of tenemented property are to be adopted. (b) Insanitary Property: The report contains no mention of any improvements effected or of conditions requiring improvement. The summary of the Inspector of Nuisances which is appended mentions that 8 ash-closets were substituted for ash-pit privies, and 10 defectively paved yards were repaired.

Nuisances.—103 were abated by service of 120 informal and 6 formal notices.

Streets.—A number of streets are mentioned as requiring attention.

Dairies, Cowsheds, and Slaughter-houses—Fifteen received supervision, but no details are given.

Factories and Workshops.—There are no factories in the district and the few workshops are satisfactory.

Appended is the report of the Inspector from which some of the figures quoted above are taken.

SANITARY REQUIREMENTS.

Street improvements.

SEAHAM HARBOUR.

L. GERALD DILLON, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	14,000	12,500
Birth-rate	39·28	37·60
Death-rate	14·21	18·88
Zymotic death-rate	2·14	2·00
Phthisis death-rate	0·78	1·12
Total Tuberculosis death-rate	2·00	3·04
Respiratory diseases death-rate	1·92	2·72
Infant mortality-rate per 1,000 births	136	144

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	41	43
Smallpox	nil.	nil.
Scarlet fever	10	9
Diphtheria	14	7
Fevers (Enteric, &c.)	12	23
Puerperal fever	nil.	nil.
Cases treated at hospital	16	13
Measles	(16)	(1)
Whooping cough	(nil.)	(5)
Diarrhœa	(8)	(13)

High zymotic death-rate (see page 13).

GENERAL SANITATION.

Water was supplied satisfactorily from the magnesian limestone measures.

Sewerage.—There now remain only four brick sewers in the district.

Scavenging was done satisfactorily by the Council's own workmen. The refuse was disposed of as manure or tipped into the sea.

Housing.—(a) New houses : 83 single and 78 tenemented houses were built. (b) Insanitary Property : 7 insanitary houses were made habitable. 12 yards were repaved with cement. Within the last 9 years 279 yards defectively paved with cobbles have been dealt with. Water-closets were substituted for 6 insanitary ash-closets. In future it is anticipated that the provision of water-closets to new houses will be required by the D.C. The new colliery houses at Dawdon are to be provided with water-closets.

Nuisances.—20 formal and 114 informal notices were served and 126 nuisances were abated.

Streets.—Several were made at Dawdon.

Common Lodging-houses (4) were conducted satisfactorily.

Milkshops (27) *Dairies* (2).—In the case of 4 milkshops action was taken to enforce cleanliness.

Slaughter-houses (14) were maintained satisfactorily.

Inspection of Ships.—208 ships were visited by the Inspector, and during the prevalence of cholera at Rotterdam the crews of all ships from that port were inspected by Dr. Dillon. Want of cleanliness (6 ships) enteric fever (2 cases) were dealt with.

Factories (7) *Workshops* (21) *Bakehouses* (48) were inspected on 168 occasions. In the case of 4 bakehouses action was taken to enforce cleanliness.

SANITARY REQUIREMENTS.

1.—Additional hospital accommodation.

2.—The cementing or asphaltting of all improperly-paved yards and footpaths.

SHILDON.

S. FIELDEN, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases & (Deaths).</i>		
	1909.	1908.		19 9.	1908.
Estimated Population	13,977	13,687	Total notifications	104	109
Birth-rate	32·62	37·55	Smallpox	nil.	nil.
Death-rate	14·02	15·40	Scarlet fever	40	28
Zymotic death-rate	1·43	2·33	Diphtheria	41	47
Phthisis death-rate	0·95	1·38	Fevers (Enteric, &c.)	10	26
Total Tuberculosis death-rate	1·64	2·26	Puerperal fever.. .. .	1	nil.
Respiratory diseases death-			Cases treated at hospital ..	61	67
rate	2·07	2·55	Measles.. .. .	(7)	(3)
Infant mortality-rate per 1,000			Whooping cough	(nil.)	(11)
births	96	101	Diarrhœa	(9)	(11)

Notification of Births Act and Infant Mortality (see pages 9 and 10).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—Good effluents were obtained at the disposal works. The sewers were flushed at regular intervals.

Scavenging was satisfactorily done on the whole. The Destructor dealt with 9,715 loads of refuse, and 1,679 loads were carted on to the land.

Housing.—(a) New Houses: 42 were built and occupied. (b) Insanitary Property: The P.H.A. (Amendment) Act, 1907, was adopted in July, and in future all houses are to be supplied with water-closets. Houses in a number of instances are now being supplied with baths. Two houses were rendered habitable under the H.W.C. Act, and 10 yards were repaved and 17 water-closets were substituted for ashpit privies. In Queen Street two cottages are to be demolished, and the remaining houses are to be provided with self-contained yards and water-closets, and the back street is to be made with scoria bricks. In Fryer Street some back-to-back houses are to be converted into through houses, and a number of insanitary conveniences are to be replaced by water-closets.

Streets.—4 front streets and 8 back streets were made, and and others are being proceeded with.

Cowsheds and Milkshops were all inspected twice. “The “cowsheds are only wooden erections, with very few exceptions, “and most of the milkshops are capable of improvement.”

Slaughter-houses were fairly well maintained.

Factories (14), *Workshops* (42), were all inspected twice, and were found satisfactory.

SANITARY REQUIREMENTS.

- 1.—To continue the abolition of midden-privies.
- 2.—To continue the cementing or asphaltting of open spaces and back yards.
- 3.—To continue with the making of front and back streets.
- 4.—The erection of new cowsheds and dairies.

SOUTHWICK-ON-WEAR.

JOHN J. CARRUTHERS, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	15,148	15,148
Birth-rate	33·07	38·35
Death-rate	14·19	18·35
Zymotic death-rate	1·58	2·77
Phthisis death-rate	0·52	1·12
Total Tuberculosis death-rate	0·59	1·38
Respiratory diseases death-rate.. .. .	3·23	3·30
Infant mortality-rate per 1,000 Births	117	187

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	88	67
Smallpox	nil.	nil.
Scarlet fever	65	44
Diphtheria	8	8
Fevers (Enteric, &c.)	15	14
Puerperal fever	nil.	nil.
Cases treated at hospital ..	62	48
Measles.. .. .	(12)	(4)
Whooping cough	(nil.)	(17)
Diarrhoea	(6)	(16)

Notification of Births Act and infant mortality (see pages 9 and 10).

GENERAL SANITATION.

Water is satisfactorily supplied by the Sunderland and South Shields Water Company. It is again recommended that a supply should be laid on to Thistley Hall. One well was closed.

Sewerage.—Three new sewers were laid and three more were partly relaid.

Scavenging was well done by the Council's own workmen. The refuse is disposed of to farmers.

Housing.—(a) New Houses: 4 were erected. Dr. Carruthers states:—"Owing to the great distress that has existed, consequent on the want of employment in the shipyards (shipbuilding being the main industry), many houses remained unoccupied all over the district, whereas three years ago an empty house was rarely seen. During the hard times, members of the same families have been more crowded together, and sub-letting of apartments has been a common practice."

(b) Insanitary Property: In the summary appended by the Inspector it is mentioned that 8 notices were served with respect to 8 houses of which 2 were closed, 1 was rendered habitable and 6 are being dealt with. 43 water-closets and 16 ash-closets were substituted for ashpit privies.

Nuisances.—555 were abated by the service of notices.

Dairies and Cowsheds.—The report states that:—"The cowsheds and dairies were frequently inspected. There is a perceptible tendency on the part of cowkeepers to adopt more modern and more wholesome methods in the management of their cows and dairies. They recognize it is acting in their own interest to do so. Reluctance to take advantage of the means provided for ventilating the cowsheds is still very noticeable however. This is the one condition that, above all others, fosters and develops tuberculosis in cows. During the year, two cowkeepers in the district disposed of the cows that failed to pass the tuberculin test, and only admitted such new cows as passed the same ordeal. The Council's Veterinary Surgeon, made quarterly, an inspection of all the dairy cows in the district. In one case he certified a cow as suffering from Tuberculosis of the Udder. The owner promptly isolated the animal, and next day it was slaughtered and buried."

Common Lodging-houses.—None.

Slaughter-houses (18).—New bye-laws have been adopted. The carcase of a tuberculous beast was destroyed.

Factories (15), *Workshops* (52), *Workplaces* (1), and *Home-workers* (7) were inspected on 276 occasions. Four notices were served to secure cleanliness (1) and suitable sanitary accommodation (3) with satisfactory results.

SANITARY REQUIREMENTS.

- 1.—Continue to abolish privy ashpits and ashclosets.
- 2.—Substitute for them water-closets.
- 3.—Continue the work of concreting back yards.
- 4.—A public slaughter-house.
- 5.—A public mortuary.

SPENNYMCOR.

W. MUSSELLWHITE, M.R.C.S., D.P.H.,
Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	16,900	16,870
Birth-rate	40·59	42·20
Death-rate	18·52	18·60
Zymotic death-rate	2·71	2·78
Phthisis death-rate	1·24	0·77
Total Tuberculosis death-rate	1·59	1·12
Respiratory diseases death-rate.. .. .	3·61	3·37
Infant mortality-rate per 1,000 births	171	160

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	116	114
Smallpox	nil.	nil.
Scarlet fever	68	52
Diphtheria	16	10
Fevers (Enteric, &c.)	7	43
Puerperal fever	2	nil.
Cases treated at hospital ..	80	82
Measles	(14)	(nil.)
Whooping cough	(nil.)	(8)
Diarrhoea	(29)	(31)

Birth-rate highest in the county (see page 4). High percentage of uncertified deaths, due to attendance of unqualified medical practitioners (see page 6). Highest infant mortality rate in the county (see page 7). Zymotic death-rate highest in the county (see page 13).

GENERAL SANITATION.

Water is satisfactorily supplied by the Weardale and Consett Water Company. There are several outlying farms at present unsatisfactorily supplied, in particular High Whitworth and Tudhoe Mill Farms.

Sewerage.—It is again reported that the works for the Spenny-moor Ward are out of order and practically useless, and that the sewage from the outer wards (Tudhoe and Ferryhill) flow straight into the river Wear. Delay in proceeding with the necessary works has arisen from the Council being unable to arrive at an agreement with the owner of the land. The latter is now to be obtained by compulsory purchase.

Housing.—(a) New Houses: 17 were erected and occupied. (b) Insanitary Property: One dwelling was closed. Ninety-six earth-closets or water-closets have been substituted for ashpit privies. Improvements are noted to houses (16 cement floors laid), yards (31 relaid or repaired), and to house drainage (one row of cottages at Whitworth connected with the sewerage system). In May, 1908, there were 234 water-closets, 2,497 earth-closets, 484 covered midden privies, and 458 open midden privies. Discussing this matter Dr. Mussellwhite says:—"The larger number of the open midden privies are the property of the Weardale Steel, Coal and Coke Company. The Company are converting these into ash closets at the rate of 60 or 70 per annum, so that the work should be completed in a few years. I cannot advise any immediate action to hasten the conversion of *earth-closets* into water-closets for two reasons: 1st—Until a proper system of sewage disposal is carried out in the district an increase in the number of water-closets would simply increase the amount of sewage pollution of the river Wear; 2nd—As most of property owners have within the last few years been put to the expense of building earth-closets to meet the requirements of the Council, it would not be fair to come down on them so soon to go to the expense of converting them into water-closets. With regard to new houses, the Council are still allowing earth-closets

“to be built, but no doubt when the drainage scheme is carried through, new houses will be required to be provided with water-closets. There can be no doubt that the latter are far more sanitary than the former.”

Scavenging is done by contractors. As a result of constant supervision the work has been done better than formerly. Sanction has been obtained to use a tip on the Whitworth Estate. The provision of a refuse destructor, whilst desirable, is not therefore at present an urgent necessity.

Nuisances.—165 informal and 239 formal notices were served, and 364 nuisances were abated.

Streets.—Not mentioned.

Common Lodging-houses (5) were “as a rule kept clean and well conducted.” Proceedings were taken against one person for keeping an unregistered lodging-house and a conviction obtained.

Dairies and Cowsheds.—Convictions were obtained against 2 dealers for selling milk containing added water. The cowshed at Burton Beck has been rendered satisfactory. It is remarked that greater cleanliness is desirable with respect to the hands of the milkers and the udders of the cows. 85 notices (in 76 instances to enforce limewashing) were served. There are two cowsheds in the district which do not possess an air space of 600 cubic feet per cow. In future no premises will be added to the register which do not attain to the minimum of 600 cubic feet per cow.

“There is no system of veterinary inspection of cows in the district with a view to the detection of tuberculous cows. In my opinion it is highly desirable that some such system should be established. One case came to my knowledge in which the milk from a tuberculous cow had been sold in the district, but unfortunately I did not hear of it until the cow had been destroyed. No doubt there are other such cows, but it is impossible to deal with them without a systematic inspection by a veterinary surgeon.”

Slaughter-houses (31) were each of them inspected twice. 98 notices to enforce limewashing were served. Being scattered about the district Dr. Mussellwhite and the inspector are unable to exert any very close supervision over the meat that is sold.

Factories (25), *Workshops* (75), *Workplaces* (6), and *Bake-houses* (3) were inspected on 153 occasions. Three notices were served with respect to 5 nuisances (defective sanitary accommodation) of which 4 were abated.

SANITARY REQUIREMENTS.

- 1.—Inspection of dairy cows by a Veterinary Surgeon.
- 2.—Appointment of Health Visitor.

STANHOPE.

JOHN GRAY, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	2,010	2,006
Birth-rate	21·34	22·43
Death-rate	10·94	11·96
Zymotic death-rate	nil.	nil.
Phthisis death-rate	2·98	0·49
Total Tuberculosis death-rate	2·98	0·49
Respiratory diseases death-rate	2·48	1·49
Infant Mortality-rate per 1,000 births	116	44

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	3	16
Smallpox	nil.	nil.
Scarlet fever	nil.	10
Diphtheria	2	2
Fevers (Enteric, &c.)	nil.	nil.
Puerperal fever	nil.	nil.
Cases treated at hospital ..	no hospital.	
Measles	(nil.)	(nil.)
Whooping cough.. .. .	(nil.)	(nil.)
Diarrhoea	(nil.)	(nil.)

Lowest death-rate among urban districts in the county (see page 6).

Compulsory notification of phthisis recommended (see page 33).

GENERAL SANITATION.

Water.—The supply was plentiful and of good quality. New metal covers are required for the receiving chambers on the Moor. Attention is directed to the waste by leakage and defective taps.

Sewerage.—Stone drains were replaced by sanitary piping in five instances.

Housing.—(a) New houses : 3 were built and 2 occupied. The general sanitary condition is reported to be good. Seven insanitary conveniences were replaced by 5 water-closets and 2 earth-closets.

Nuisances.—47 notices were served with satisfactory results.

Dairies, Cowsheds, and Slaughter-houses.—Not mentioned.

Factories and Workshops.—None.

SANITARY REQUIREMENTS.

1.—Some means of isolating cases of infectious disease.

2.—Improved access to certain back premises to facilitate public scavenging.

3.—Notification of tubercular diseases of the lungs.

STANLEY.

T. BENSON, L.R.C.P., Medical Officer of Health.

<i>Vital Statistics.</i>				<i>Infectious Diseases—Cases & (Deaths).</i>			
	1909.	1908.			1909.	1908.	
Estimated Population	21,500	20,500		Total notifications	255	121	
Birth-rate	36·04	39·80		Smallpox	nil.	nil.	
Death-rate	23·44	18·14		Scarlet fever	189	43	
Zymotic death-rate.. .. .	1·58	3·51		Diphtheria	45	46	
Phthisis death-rate	0·88	1·26		Fevers (Enteric, &c.)	10	22	
Total Tuberculosis death-rate	1·48	2·04		Puerperal fever.. .. .	nil.	nil.	
Respiratory diseases death-				Cases treated at hospital ..	180	94	
rate	3·25	3·65		Measles.. .. .	(5)	(1)	
Infant mortality-rate per 1,000				Whooping cough	(4)	(29)	
births	138	191		Diarrhoea	(5)	(31)	

High death-rate due to 166 deaths caused by a pit disaster (see page 5).

Notification of Births Act and Infant mortality (see pages 9 and 10).

GENERAL SANITATION.

Water was supplied satisfactorily by the Weardale and Consett Water Company.

Sewerage.—The sewage disposal works are situated at South Moor and West Shield row. The former works require extending.

Scavenging was efficiently done by contractors.

Housing.—(a) New Houses: 251 self-contained and 8 tenemented houses were built. (b) Insanitary property: Improvements are noted at the following places:—(1) Stanley—Closing orders were issued for some irreparable property in Busty Street (12 houses), Wood Street (16 back-to-back and 12 single houses). (2) Joicey Terrace (64 houses)—Ash-closets were erected. (3) South Moor—Pine and Poplar Streets—the yards are being cemented and new outoffices are being erected. Houses are being reconstructed at (1) Stanley (High Street and Land Street); (2) Havannah (George Street and Alfred Street). Improvements are required at (1) South Tanfield (objectionable conveniences); (2) South Moor (89 houses in very defective condition).

Nuisances.—None mentioned.

Dairies and Milkshops.—There are 8 cow-keepers and 8 milk vendors. The supply was good. Action was taken to prevent the accumulation of manure in the vicinity of the byres with satisfactory results.

Slaughter-houses and Common Lodging-houses (1) were maintained satisfactorily.

Factories (12), *Workshops* (40), and *Bakehouses* (1) were inspected on 106 occasions. Two nuisances due to want of cleanliness were detected and remedied.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation.

TANFIELD.

T. BENSON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	10,100	9,600
Birth-rate	35·94	36·97
Death-rate	12·37	15·00
Zymotic death-rate	1·28	2·81
Phthisis death-rate	0·79	0·83
Total Tuberculosis death-rate	1·58	1·66
Respiratory diseases death-rate	1·78	2·70
Infant mortality-rate per 1,000 births	121	107

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	154	90
Smallpox	nil.	nil.
Scarlet fever	94	28
Diphtheria	26	29
Fevers (Enteric, &c.)	5	8
Puerperal fever.. .. .	1	nil.
Cases treated at hospital ..	72	44
Measles	(4)	(3)
Whooping cough	(1)	(3)
Diarrhoea	(4)	(6)

Low death-rate (see page 6).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The various works in the district acted fairly satisfactorily. All the villages are sewered.

Scavenging was satisfactorily done by contract. The refuse tips caused no nuisance.

Housing (a) New Houses: 56 were built. (b) Insanitary Property: Improvements are noted at (1) Hobson Colliery (new outoffices and repairs to houses); (2) Dyke Head (6 houses repaired and altered and water laid on). Referring to White-le-Head and Corving Houses Dr. Benson states “although the houses have “been patched up and made as presentable as possible, no structural alterations of any importance have been made.” At Tantobie also very little improvement has been effected. Dr. Benson again refers to Clough Dene as follows:—“The majority “of these houses are scarcely fit for human habitation. Six of “the houses in the valley are without back doors, and are therefore imperfectly ventilated, and 3 of them are only single-roomed. “Of 15 more houses situated on the hill, only 3 have through

“ventilation by means of back doors. The reason given for their “non-improvement is that they are chiefly owned and occupied “by old people, who feel loth to disturb the houses, but some “improvement should be insisted on.”

Dairies and Cowsheds.—The cow-keepers are reported to have “fairly decent byres.”

Slaughter-houses were “occasionally visited and found satisfactory.”

Factories (14) and *Workshops* (21) were inspected on 70 occasions, and were found to be satisfactory.

SANITARY REQUIREMENTS.

Improvements to the housing as detailed in report.

TOW LAW.

J. H. NAISMITH, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	4,371	4,371
Birth-rate	26·53	31·42
Death-rate	13·72	12·35
Zymotic death-rate	0·68	0·45
Phthisis death-rate	0·45	0·68
Total Tuberculosis death-rate	0·91	0·68
Respiratory diseases death-rate.. .. .	2·97	2·97
Infant mortality-rate per 1,000		
Births	77	72

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	58	16
Smallpox	nil.	nil.
Scarlet fever	43	3
Diphtheria	1	1
Fevers (Enteric. &c.)	2	3
Puerperal fever	nil.	nil.
Cases treated at hospital ..	30	6
Measles.. .. .	(nil.)	(nil.)
Whooping cough	(nil.)	(nil.)
Diarrhœa	(nil.)	(2)

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The drainage is efficient, but the disposal of the sewage is not satisfactory.

Scavenging was satisfactorily carried out by contractors.

Housing.—(a) New Houses: 4 were built. Two houses were converted into 4 cottages. (b) Insanitary Property. No information is given.

Nuisances.—34 informal and 6 formal notices were served and 28 nuisances abated. Appended is the report of the Inspector of Nuisances, from which some of the figures quoted above are taken.

Streets.—No improvements have been made yet to the back streets.

Dairies and Milkshops.—Local milk supplies are only used. No improvements have been effected to the cowsheds.

Slaughter-houses, Factories (1), and *Workshops* (1) were maintained satisfactorily.

SANITARY REQUIREMENTS.

None mentioned.

WHICKHAM.

ANDREW SMITH, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	16,719	16,195
Birth-rate	36·18	35·81
Death-rate	13·33	14·6
Zymotic death-rate	0·83	1·97
Phthisis death-rate	1·13	1·17
Total Tuberculosis death-rate	1·85	1·85
Respiratory diseases death-rate	1·73	2·59
Infant mortality-rate per 1,000 births	95	127

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	123	99
Smallpox	nil.	nil.
Scarlet fever	56	40
Diphtheria	47	44
Fevers (Enteric, &c.)	9	2
Puerperal fever	3	2
Cases treated at hospital.. ..	57	25
Measles	(4)	(1)
Whooping cough.. .. .	(1)	(12)
Diarrhœa	(6)	(16)

Notification of Births Act and infant mortality (see pages 9 and 10). Vaccination (see page 14). Diphtheria spread by "carrier" (see page 17). Whooping cough, spread of the disease in schools (see page 26).

GENERAL SANITATION.

Water.—Marley Hill is supplied by the Weardale and Consett Water Company, and the rest of the district by the Newcastle and Gateshead Water Company. Some houses at the Brickworks, Swalwell (mentioned in last year's report) are to have a supply laid on.

Sewerage.—Dr. Smith states that the abolition of the open channels in Marley Hill and Byremoor is “the most urgent sanitary improvement required in the whole district.” A scheme has been decided upon for Marley Hill, but no plans have so far been made for Byremoor. The whole of Swalwell is now satisfactorily drained.

Scavenging was efficiently done by the Council's own workmen.

Housing.—(a) New Houses: 154 were built (or are in course of erection) and 109 were occupied, chiefly at Dunston, where “the avenue system increasingly prevails, and the houses afford excellent accommodation.” (b) Insanitary Property: Staircases have been put into the houses of Cinder Burners' Row, Marley Hill, and a number of yards were paved at Waterside (Swalwell). An amount of paving is still required in this locality, notably at Brewery Bank, Spencer's Bank, and Quality Row. The remainder of the back-to-back houses in Post Office Row, Marley Hill, should be converted into through houses.

Nuisances.—927 nuisances were abated, 958 formal notices were served.

Streets.—A number of streets require to be made in all parts of the district.

Dairies and Cowsheds.—All the cow byres have been measured by the Inspector, who found that “11 gave over 800 cubic feet per cow, 12 between 600 and 800, 5 between 500 and 600, and 4 under 500, but one of them was just under, it was 497.” The bye-laws in force prescribe a minimum of 500 cubic feet per cow,

and notices were served on the defaulters to remedy the overcrowding in the three instances, with satisfactory results.

Slaughter-houses still remain unregistered, but are subjected to regular inspection.

Factories, Workshops (15), and *Bakehouses* (4) are reported to be satisfactory.

SANITARY REQUIREMENTS.

1.—Improvements to the housing accommodation in certain parts of the district.

2.—Abolition of open channels in Marley Hill and Byremoor.

3.—Registration of Slaughter-houses.

WILLINGTON.

R. E. BROWN, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	7,970	7,959
Birth-rate	34·62	35·30
Death-rate	12·92	22·86
Zymotic death-rate	0·75	2·88
Phthisis death-rate	0·75	0·50
Total Tuberculosis death-rate	1·13	1·00
Respiratory diseases death-rate	1·13	4·27
Infant mortality-rate per 1,000 births	108	241

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	31	60
Smallpox	nil.	nil.
Scarlet fever	11	20
Diphtheria	3	17
Fevers (Enteric, &c.)	13	10
Puerperal fever.. .. .	1	1
Cases treated at hospital	23	46
Measles.. .. .	(1)	(3)
Whooping cough	(nil.)	(2)
Diarrhoea	(1)	(17)

GENERAL SANITATION.

Water.—The district is well supplied by the Weardale and Consett Water Company. No wells are now in use, though the outlying farms are dependent upon springs.

Sewerage.—The treatment of the Willington sewage by continuous filtration (Stoddart's method) is unsatisfactory, and secondary treatment by land irrigation has to be resorted to. Dr. Brown again recommends the construction of a new filter, the clinker at present in use being unsatisfactory. The Willington Burn and River Wear are still being polluted by sewage from Willington (high part) and Page Bank Colliery respectively. It is expected that the construction of works for dealing with these pollutions will be started shortly.

Scavenging was done fairly satisfactorily. Dr. Brown again says: "The fouling of the streets by the emptying of the privy-midden contents still takes place in some parts of the district. "This ought to be immediately remedied." The use of the tip at Low Willington is to be discontinued, and another site has been acquired.

Housing.—(a) New Houses: 9 were erected. (b) Insanitary Property: 35 yards were repaved; 86 ash-closets, 10 water-closets, and 5 pan-closets have been substituted for privy-middens. Dr. Brown again calls attention to certain defective conditions which require attention, more especially to certain houses at Oakenshaw and in Park Street and High Street, Willington.

Nuisances.—248 were abated, 69 formal and 345 informal notices being served.

Streets. —A number of back streets require attention. *Public Conveniences.*—Dr. Brown mentions that one new urinal with closets has "been constructed which ought to serve a good purpose in the town but unfortunately a good deal of wanton "destruction has been done since it has been opened to the public. "A better use and a greater regard for the value of such places "might be considered."

Dairies and Cowsheds.—The dairies are reported to be kept clean, but some of the cow byres require improvements with respect to ventilation and lighting. Improvements were effected to 2 milk shops.

Slaughter-houses (6) are registered and regularly inspected. Improvements to premises are mentioned in one instance.

Factories (9), *Workshops* (29), and *Bakehouses* (3) were inspected by both the Medical Officer of Health and Sanitary Inspector on 82 occasions. Notices were served for insufficient sanitary accommodation (4), and other nuisances (1) with satisfactory results.

SANITARY REQUIREMENTS.

1.—The abolition of open midden privies throughout the district.

2.—Water-closets or ash-closets with pails or buckets for the dry refuse where the privy-midden contents have to be wheeled on to the streets from the yards.

3.—Continuation of repaving of the footpath on the north-side of the main street.

4.—The making, paving, channelling of the private streets.

5.—Attention to the cowsheds which are defective in their lighting and ventilaton.

6.—Improvements to the housing accommodation.

7.—The construction of a new filter bed at the sewage works.

8.—The covering in of the ditch by the roadside south of Langley Close Farm, on the main turnpike as this is exceedingly dangerous, especially to vehicular traffic.

RURAL DISTRICTS.

AUCKLAND RURAL DISTRICT.

J. G. WILLIS, L.R.C.P., D.P.H., Medical Officer of Health

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases & (Deaths).</i>		
	1909.	1908.		1909.	1908.
Estimated Population	60,505	59,840	Total notifications	512	401
Birth-rate	33·86	35·94	Smallpox	nil.	nil.
Death-rate	14·27	16 81	Scarlet fever	340	163
Zymotic death-rate	1·33	2·33	Diphtheria	59	76
Phthisis death-rate	0·62	0·61	Fevers (Enteric, &c.)	55	116
Total Tuberculosis death-rate	1·18	1·10	Puerperal fever.. .. .	2	1
Respiratory diseases death-			Cases treated at hospital ..	172	114
rate.. .. .	2·01	2·70	Measles	(8)	(14)
Infant mortality-rate per 1,000			Whooping cough	(13)	(18)
births	128	147	Diarrhœa	(31)	(73)

GENERAL SANITATION.

Water.—“ Most of the district is supplied with a wholesome “ and sufficient water supply, derived from two public supplies— “ the Weardale and Consett and the Barnard Castle Companies ” Twenty-six houses were connected with a public supply.

Sewerage.—Two new secondary filters were constructed at the Coundon works. The Dene Beck works were completed. Joint schemes are under consideration for (1) West Auckland, St. Helens, Fylands and Tindale Crescent, and (2) Hunwick and Sunnybrow. The Local Government Board has held an enquiry into the scheme for disposal works for Witton Park and Byers Green.

Scavenging was done more satisfactorily by the contractors. Dr. Willis states :—“ The closets are still emptied in the day time, “ which is most objectionable. I again assert that this work “ should be carried out at night in those parts of the district which “ are not strictly rural.”

Housing.—(a) New Houses : 165 were occupied. (b) In-sanitary Property : 2 houses were closed as unfit for habitation.

Streets.—A number of streets were made and plans are being prepared for more extensive improvements.

Dairies and Cowsheds (186) are registered and periodically inspected. Several cowbyres were considerably improved. New bye-laws were adopted making 600 cubic feet the minimum to be measured from a height not exceeding 12 feet.

Slaughter-houses (60) were found satisfactory. Referring to the seizure of a tuberculous beast, Dr. Willis says :—“ The carcase “ was condemned, and proceedings taken against the butcher. It “ was the most diseased carcase I have ever seen during an “ experience extending over 15 years. There were six magistrates “ on the Bench. The Bench were divided in their opinion ; “ consequently there was not a conviction.”

Common Lodging-houses (2), *Factories* (16) *Workshops* (98) and *Workplaces* (1) are reported to be satisfactory. No table of inspections is appended to the report. Appended are the reports of the Inspectors from which it appears that 1200 nuisances were abated during the year as the result of the service of 897 informal and 449 formal notices under the Public Health Acts. Under the H.W.C. Act, 1890, 6 notices were served with respect to 6 dwellings of which 4 were rendered habitable and 2 were closed permanently.

SANITARY REQUIREMENTS.

Scavenging at night time in those parts of the district which are not strictly rural.

BARNARD CASTLE RURAL DISTRICT.

JAMES C. NELIGAN, L.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>				<i>Infectious Diseases—Cases & (Deaths).</i>			
		1909.	1908.			1909.	1908.
Estimated Population	.. ..	11,974	11,808	Total notifications	.. ..	64	41
Birth-rate	.. ..	27·72	27·84	Smallpox	.. ..	nil.	nil.
Death-rate	.. ..	13·82	15·92	Scarlet fever	.. ..	11	8
Zymotic death-rate	.. ..	0·25	1·86	Diphtheria	.. ..	12	26
Phthisis death-rate	.. ..	1·41	0·76	Fevers (Enteric, &c)...	.. ..	1	1
Total Tuberculosis death-rate		1·50	0·93	Puerperal fever	.. ..	nil.	nil.
Respiratory diseases death-				Cases treated at hospital..	..	6	8
rate	.. ..	1·50	1·69	Measles	.. ..	(nil.)	(3)
Infant mortality-rate per 1,000				Whooping cough	.. ..	(3)	(6)
births	.. ..	117	112	Diarrhoea	.. ..	(nil.)	(5)

Measles made compulsorily notifiable (see page 24).

GENERAL SANITATION.

Water.—Two hydraulic rams capable of forcing 11,000 gallons of water per 24 hours from a spring on Langleydale Fell to the Cockfield reservoir have been erected. There was a shortage of water at Middleton in the summer, due to leakage from the earthenware main, which to the extent of 2,800 yards requires replacing with cast-iron pipes. The Middleton water has been laid on to 16 houses at High Dike and the Tees Valley Water Board's main has been connected with 48 houses at Staindrop where, however, Dr. Neligan states:—"Very few tenants, however, use the water, "either owing to prejudice, or probably having to pay the water "rate; consequently the Water Board refuse to make any more "connections with their main until proper application is made for "the water." The public pumps in the various villages were kept in good order.

Sewerage and sewage works are reported to be satisfactory throughout the district.

Scavenging at Cockfield was satisfactorily done by contractors employed by the local authority. Elsewhere the tenant is responsible for his own scavenging. Forty-four notices were issued for the abatement of nuisances caused by neglect to scavenge.

Housing.—(a) New Houses: 47 were built—at Cockfield (37), Gainford (3), Ingleton (1), Marwood (2), and Winston (2). (b) Insanitary Property: Structural defects were remedied in 20 houses. Nuisances caused by defective yards (4), defective drainage (36), foul conditions (1), and overcrowding (2 instances) were abated. Twenty-one privy middens were replaced by ashclosets, pail closets or water-closets. Dr. Neligan strongly recommends that the remainder of the midden privies should be similarly converted.

Nuisances.—219 were abated by the service of 56 statutory and 161 informal notices.

Dairies and Cowsheds were maintained satisfactorily. Defects were remedied at one cowshed.

Slaughter-houses (16) were periodically inspected. Dr. Neligan recommends that:—"The license in one case should be renewed for six months only owing to the slaughter-house being kept in an unsatisfactory state."

Common Lodging-house (1) was well maintained.

Factories (15), *Workshops* (41), and *Workplaces* (3) were inspected on 59 occasions and found satisfactory.

SANITARY REQUIREMENTS.

Abolition of midden privies.

CHESTER-LE-STREET RURAL DISTRICT.

JOHN TAYLOR, M.D., D.P.H., Medical Officer
of Health.

Vital Statistics.

	1909.	1908.
Estimated population	62,739	74,916
Birth-rate	37.63	37.49
Death-rate	15.01	17.68
Zymotic death-rate	1.78	3.52
Phthisis death-rate	0.65	0.85
Total Tuberculosis death-rate	1.14	1.56
Respiratory diseases death-rate	2.64	2.49
Infant mortality-rate per 1,000 births	140	176

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	514	685
Smallpox	nil.	nil.
Scarlet fever	379	390
Diphtheria	76	104
Fevers (Enteric, &c.)	51	112
Puerperal fever	4	4
Cases treated at hospital ..	98	124
Measles	(12)	(17)
Whooping cough	(28)	(46)
Diarrhoea	(42)	(159)

Health visitor urgently needed (see page 11). Prevention of the spread of scarlet fever (see page 15). High death-rate among illegitimate children (see page 12). Enteric fever attributed to the eating of infected shell-fish (see page 22). Infectiousness of whooping cough in schools (see page 27).

GENERAL SANITATION.

Water was plentifully supplied to the whole district. The Weardale and Consett and Newcastle and Gateshead Water Companies deliver filtered water, but other companies, supplying the townships of Washington, Burnmoor, Barinston, and Harraton, use unfiltered water (derived from deep wells in the limestone) which Dr. Taylor regards as “potentially unsafe, owing to the “fact that it may be contaminated at any time with surface pollution, entering through one or more of the large fissures. The “working of the coal under this limestone must be perpetually increasing and altering the number and position of these fissures.” Kibblesworth also derives its supply from a source that can be polluted. The opinion is again expressed that the storage of the Lambton Collieries Water Company (four days supply only) should be increased. Weardale and Consett water has been laid on to the Paper Mill, Urpeth (9 houses), and a similar supply is to be obtained for Bewicke Main Colliery (84 houses). Water was laid into the Wash Houses, Birtley (16 houses), and the District Council have resolved to make similar improvements to houses in the township of Washington—at Washington Staiths (4) and Jubilee Terrace (4)—in default of the work being done by the owners.

Sewerage.—Works (bacteria beds) are to be constructed in the township of Ouston, to deal with the sewage of Ouston, Perkinsville, and Ouston Colliery. New drainage and properly-trapped gullies have been laid throughout the village of Ouston. Club Row and adjacent houses, Pelton Fell, is to be sewered. Lumley village requires a new system of sewerage, as also Waldridge, where open channels are in use.

Scavenging is done by contractors, except in three instances where the proprietors undertake the work. The contractors, as in previous years, required a considerable amount of supervision, and it was necessary to cancel the contract at Washington.

Housing.—(a) New Houses: 422 houses were built and occupied during the year in the townships of Washington (88), Birtley (108), Witton Gilbert (87), Usworth (20), Little Lumley (41), Pelton (28), and Lamesley (24). “The Sanitary Inspectors, “who now act as building inspectors, are carefully supervising the “proper construction of drains, and are insisting on the buildings “being erected in strict conformity with the plans approved by the “Council.”

(b) Insanitary Property: Dr. Taylor reviews the sanitary conditions of the various townships in the district at considerable length, and mentions the improvements effected during the year and the conditions which urgently require to be remedied in the immediate future. Sixty-five houses were closed by agreement with the owners in the townships of—Barmston (13); Birtley (7); Burnmoor (11)—(at Old Engine Row and “D” Pit Square); Washington (20)—at Engine Square (4), Old Rows (12), Firebrick Cottages (3), Village Lane (1); Lamesley (4); Great Lumley (1); Pelton (2); Usworth (3)—(tenements in the Old Hall); Walldridge (2)—(at the Day Hole); and Witton Gilbert (2). Improvements consisting of the reconstruction of houses (50), erection of ash-closets (369), water-closets (18), drainage of houses (326) and cementing of back yards (130) were effected during the year.

Improvements have or are being made to houses in the townships of:—Barmston—(At Pattison Town 62 back-to-back houses are being converted into 31 through 4 roomed houses and are being provided with new roofs, yards and ash-closets); Burnmoor—(at New Lambton houses rebuilt in Old Engine Row (4) and Elba (1); Cocken—(Grainger Terrace houses repaired); Lamesley—(houses reconstructed at Kibblesworth (8) and Tinkler’s Row (1); Pelton—(38 houses repaired, 24 yards cemented and 2 back-to-back houses in Pelton Village converted into through houses); Plawsworth—(at Nettlesworth 3 houses raised and provided with cement yards and ash-closets); Usworth—(at Railway Street, Usworth Village, 30 yards cemented); Witton Gilbert—(houses reconstructed (13) and repaired (4) and yards cemented (8).

Ash-closets were substituted for ashpit privies in the townships of Harraton (93)—(at Chapel and Office Rows, Harraton Colliery, Pelaw Grange Terrace and Rickleton); Burnmoor (22)—(at Railway Terrace and “D” Pit Row, New Lambton); Cocken (11); Lamesley (10 ash-closets and 2 water-closets); Great Lumley (7); Pelton (41 ash-closets and 4 water-closets); Plawsworth (14); Usworth (37); Washington (30)—(at Spout Lane, Lambert’s Place, Village Lane, &c.); Witton Gilbert (52).

Properties requiring improvements are mentioned in the townships of Barmston—at Barmston Hill Top (tenemented back-to-back houses); Harraton—at Low Flatts (12) dampness and unpaved surroundings), Nova Scotia and the Square, Fatfield (houses small and unfit, and require to be rebuilt); Burnmoor—at Long Row, Burnmoor and Chapel Row, New Lambton (houses old and defective); Great Lumley—at Lumley Village, George Pit and Shop Houses (houses old and not in good habitable condition); Urpeth—at Hammer Square and Eden Rows (houses require raising), Eden Square and Park Nook (unfit for habitation); Usworth—at Old Hall, Usworth Colliery (2 tenements unfit for habitation); Washington—at Old Row (19) and other houses (unfit for habitation), Speculation Place, New Washington (back-to-back houses).

It is recommended that ashclosets should be substituted for ashpit privies in the townships of:—Edmondsley, Lamesley (at Team Colliery paved yards are also required), Ouston, Pelton, (at West Pelton), Plawsworth and Washington (at Shaftoe Terrace, self-contained yards should also be provided).

Streets.—In most of the townships considerable improvements are required to the streets. Streets have or are being made in the townships of Birtley (30), Pelton (23), Usworth (35) and Harraton. Plans are also being prepared for the making of streets in the townships of Urpeth and Washington. Application has also been made to the Local Government Board for sanction to a loan for the making of three streets in the township of Witton Gilbert.

Common Lodging-house (1) was maintained satisfactorily, though the premises are ill-adapted for use as a lodging-house.

Slaughter-houses.—There are now bye-laws “regulating to some extent these places,” and Dr. Taylor “thinks there will soon be a gradual improvement.”

Dairies and Cowsheds.—Improvements consisting of laying in a good water supply and repairs to floors were effected in 11 instances. “The byres are being kept better than formerly, which, in the great number of cases is entirely the result of your inspector’s work in connection with them.”

Factories and Workshops.—These were inspected regularly and found satisfactory.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation and abolition of ashpit privies as mentioned above.
- 2.—Sewering of Lumley Village and Walldridge.
- 3.—Enlargement of Isolation Hospital.
- 4.—Appointment of Health Visitor.
- 5.—Additional hospital accommodation.

DARLINGTON RURAL DISTRICT.

ROBERT H. MEIKLE, M.B., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	9,591	9,591.
Birth-rate	28·04	30·65
Death-rate	14·38	13·97
Zymotic death-rate	0·31	0·31
Phthisis death-rate	0·83	1·04
Total Tuberculosis death-rate	0·93	1·87
Respiratory diseases death-rate... .. .	1·45	1·56
Infant mortality-rate per 1,000 births	104	95

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	26	26
Smallpox	nil.	nil.
Scarlet fever	12	7
Diphtheria	5	8
Fevers (Enteric, &c.)	5	5
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	12	4
Measles.. .. .	(nil.)	(nil.)
Whooping cough	(1)	(2)
Diarrhoea	(1)	(1)

Compulsory notification of Phthisis recommended (see page 33).

GENERAL SANITATION.

Water.—The public supply at Great Aycliffe was satisfactory, and has been laid into an increased number of houses. At Black-

well some houses formerly dependent on a pump situated at some distance, have had a supply laid in from the Darlington Corporation main. At Hurworth a public pump at the west end of the village, which was “dangerously contaminated with surface water and tar from the tarred macadam roadway,” has been abolished and the nine houses in the neighbourhood are to be supplied by the Tees Valley Water Board. Water from the same source has been laid into 6 other houses in the village. At Killerby a well which was yielding water of a suspicious character was cleaned out and lined with cement.

Sewerage.—The sewerage of Houghton-le-Skerne was completed and the house connections were made. A number of defective drains were found and relaid, and all the houses were disconnected by intercepting taps. Similar improvements were effected at Heighington (south-east corner of the village), Hurworth Place and at Brussleton Houses, Redworth. Surface water sewers are required at Middleton St. George and Sandberge. At Low Coniscliffe a nuisance arose from the standage of sewage in the pond below the tank. The pond is to be filled in and a filter is to be constructed on the site. Works are also to be constructed for dealing with the sewage from Brussleton Houses and the Harrowgate Hill Estate. In other parts of the district the sewage was satisfactorily disposed of.

Scavenging.—Dr. Meikle states :—“In only one instance was “the public scavenging done unsatisfactory; this was at Cockerton, “where the contract was cancelled and re-let. In each part of “your district where public scavenging has been adopted infectious “disease has gradually lessened.”

Housing (a) New Houses : 32 were built and plans for 42 more were passed. (b) Insanitary Property : An insanitary house was closed at Great Aycliffe and others were demolished at Cockerton (2) and Redworth (1) and rebuilt. Five houses at Hurworth Place were rendered habitable, and a few improvements were made to yards and conveniences at Barmpton and Blackwell.

Nuisances.—179 were dealt with.

Streets.—On the Harrowgate Hill estate, Haughton-le-Skerne, the streets, which are all in a “deplorable state,” are to be made. Attention has been given to the village pond at Heighington, which was a source of nuisance, and in future it is to be cleaned out more regularly.

Dairies and Cowsheds.—Dr. Meikle states:—“A good many “dairies and cowsheds have been visited and a few of them were “in every way satisfactory both as to cleanliness and sanitary “arrangements, and unfortunately it is a common belief that a “dairy is a place for “storing” articles and not a place purely “for dairy products. Defects in many were noted, such as cobble “paving, narrow causeways, inefficient lighting and ventilation.” New byres were erected at Barmpton (2) and Heighington (2).

Factories and Workshops (35) were inspected on 24 occasions. Four notices were served to enforce ventilation (3) and proper sanitary accommodation (3) with satisfactory results.

SANITARY REQUIREMENTS.

None mentioned.

DURHAM RURAL DISTRICT.

A. T. HARRISON, L.S.A., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	29,301	28,932
Birth-rate	35·69	36·81
Death-rate	15·15	17·83
Zymotic death-rate	1·29	1·97
Phthisis death-rate	0·95	0·79
Total Tuberculosis death-rate	1·70	1·79
Respiratory diseases death-rate.. .. .	2·59	2·73
Infant mortality-rate per 1,000 births	129	156

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	196	99
Smallpox	nil.	nil.
Scarlet fever	105	38
Diphtheria	51	23
Fevers (Enteric, &c.)	27	29
Puerperal fever.. .. .	1	nil.
Cases treated at hospital ..	121	67
Measles	(2)	(14)
Whooping cough	(3)	(6)
Diarrhoea	(22)	(26)

GENERAL SANITATION.

Water is supplied by (1) Messrs. Walter Scott & Company to Old Cassop, Quarrington Hill, Cassop Colliery and Kelloe. (2) Weardale Coal & Coke Company to Ludworth, and (3) the Weardale and Consett Water Company to the remainder of the district supplied by public companies. A shallow well at High Grange (Shincliffe) has been filled in and the Weardale and Consett water laid on. Shadforth Village, which is dependent on shallow wells is to be supplied by the Weardale and Consett Water Company as soon as the sanction of the Local Government Board to a loan of £800 for carrying out the work is obtained. Old Quarrington, Cold Knuckles Farm (Sherburn). Old Durham Cottages, Brasside, Cassop Smithy and Strawberry Hill Farms, and Broomside Pit Cottages are still without a proper water supply.

Sewerage.—A new outfall sewer and works have been constructed at Crossgate Moor. The contract for similar work at Bearpark has been let and is in hand. Plans and estimates for works and sewerage at East Hetton and for new sewerage (to replace the open channels) at Shincliffe Colliery have been prepared. Ludworth village requires to be sewered. Various becks are polluted with sewage from the following places:—East Hetton and California, Ludworth and Shadforth, Littleton and Low Pittington; the river Browney is also polluted by sewage from Bearpark.

Scavenging devolves upon the occupiers at St. Oswald's, Sherburn Hospital, Whitwell, and Brancepeth. Dr. Harrison again recommends that the model bye-laws in respect to private scavenging should be adopted, also that public scavenging should be introduced at Brancepeth.

Housing.—(a) New Houses: 115 were completed and occupied, and plans for 6 streets and 125 new dwelling-houses were passed. (b) Insanitary Property: Dr. Harrison says:—"The "house accommodation for the working classes in many parts of

“the district is adequate and good. In the older parts, however, especially east of Durham City, many of the houses are of a poor type, and are fast approaching a condition of unfitness for human habitation.” Six houses were closed in Lambton Street, Sherburn Hill. *Notices were served on the owners of the following property at Pittington*—Bird-in-the-Bush (2 houses defective generally), Buddle Cottages (2 cottages defective generally), and Broomside Old Pit (4 houses defective generally and without proper water supply); Long, Short and Wood Rows, Brasside (houses defective and unprotected foundations); Hett (25 houses, dampness caused by defective roofs, walls and spouting). *Notices were again served with respect to the following properties*—Front Double Row, Quarrington Hill; Burrell Street, Kelloe; Avenue, Pond and Short Rows, Shincliffe Bank Top; and White Lane Terrace, Ushaw Moor. *Improvements have or are being made to the following properties at Belmont* (a few more ashclosets erected); Kelloe, Lancaster Street (reconstruction of 35 houses completed), Heysham Terrace, (reconstruction of 17 houses completed, but coal-houses and pavement of front street still required), Main Street (6 houses reconstructed); Shadforth (a number of houses rebuilt or repaired); Sherburn Village (a few new ashclosets); Littletown (houses imperviously paved on ground floors and ventilation improved); Broompark (abolition of ashpit privies and cementing of yards); Bearpark (erection of 20 ashclosets); Framwellgate Moor, Dyke Row and Newcastle Row (ashpit privies abolished), Pump Row (6 houses demolished, and ashclosets and coal-houses erected on the site; Brasside, Short Row (houses repaired and foundations protected). Attention is again drawn to the fact that *improvements are required at the following property*—Kimbleworth (a number of insanitary conveniences); Shadforth Terrace, Ushaw Terrace, and Margaret Street, Ludworth (houses damp and defective generally and defective yards and drainage); Lambton Street, Sherburn Hill (houses defective, brick floors, damp, badly lighted and ventilated, and no provision for surface drainage); Bearpark (insanitary conveniences and unpaved surroundings).

Nuisances.—301 were abated; 315 informal notices were served.

Dairies and Cowsheds were inspected regularly, and attention was given to the water supply which requires improvements in a few instances.

Slaughter-houses required constant supervision in the case of the smaller premises.

Factories and Workshops are not mentioned.

Appended are the reports of the Surveyor and the Inspector of Nuisances, from which some of the facts mentioned above are taken.

SANITARY REQUIREMENTS.

1.—Public water supply for certain dwellings and outlying farms.

2.—Improvements to the housing accommodation as detailed above.

3.—The sewerage of Ludworth Village.

4.—Public scavenging at Brancepeth.

5.—Adoption of model bye-laws at places where the scavenging devolves upon the occupiers.

6.—Adoption of the Notification of Births Act and the appointment of a Health Visitor.

7.—Additional hospital accommodation.

EASINGTON RURAL DISTRICT.

JAMES ARTHUR, L.R.C.P., D.P.H., Medical Officer
of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	56,922	54,614
Birth-rate	34·85	38·23
Death-rate	16·23	16·66
Zymotic death-rate	2·40	2·92
Phthisis death-rate	0·68	0·76
Total Tuberculosis death-rate	1·49	1·39
Respiratory diseases death- rate	2·26	2·45
Infant mortality-rate per 1,000 births	153	162

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	522	503
Smallpox	nil.	1
Scarlet fever	241	280
Diphtheria	107	70
Fevers (Enteric, &c.)	102	109
Puerperal fever	3	6
Cases treated at hospital ..	58	45
Measles	(46)	(7)
Whooping cough	(3)	(19)
Diarrhoea	(49)	(106)

High Infant Mortality rate (see page 7).

Enteric Fever attributed to watercress taken from polluted streams (see page 22).

Insanitary open channels (see page 43).

GENERAL SANITATION.

Water—South Hetton is now supplied by the Sunderland and South Shields Water Company, and High Wheatley Hill and Wingate Lane by the Weardale Steel, Coal and Coke Company. The supply to Hutton Henry and South Wingate has been improved by erecting a standpipe giving an extra head of 15 feet at Wingate reservoir, and further improvements are contemplated.

Sewerage.—Additional land has been acquired for extending the sewage works (bacterial filters) for Thornley and Wheatley Hill. At the Murton and Shotton works (bacterial filters) the sludge was a source of trouble. A main outfall to the sea is to be constructed to take the combined sewage of Haswell, South Hetton, Murton, Dalton-le-Dale, Cold Hesleden, Seaton and Seaham. A similar scheme to deal with the combined sewage of Horden Colliery, Blackhall Colliery, Easington and Thorpe has also been prepared. The report states that 2,660 yards of new sewers were laid, 2,436 yards of old sewers were relaid, and that 61 manholes and 10 ventilators were fixed in position. These

improvements were effected at Murton (2,590 yards), Seaham and Seaton (430), Easington and Thorpe (670), Monk Hesleden (430), Haswell (476), Kelloe (150), and Wingate (610).

Scavenging is done by contractors. At Murton, Trimdon, and South Hetton the work was unsatisfactorily done, and a change of contractors was necessary. Dr. Arthur states that: “A
“Special Committee has had under consideration a scheme for
“undertaking the work by a cleansing department, with appliances
“owned by the Council and manipulated by their own workmen.
“After full consideration it was decided that the present arrange-
“ments, if properly enforced, should work satisfactorily, and it is
“proposed that an additional Inspector be appointed specially
“charged with the supervision of scavenging. Next to water
“supply, efficient scavenging is certainly the most potent factor
“in preventing the spread of infectious diseases, particularly
“enteric fever, diphtheria, and diarrhœa. The co-operation of
“the householder in sanitation still leaves much to be desired.
“Where ash-closets have been provided, ashes and refuse are still
“deposited on the ground, when there is no excuse. Slops are
“thrown into the yard and allowed to find their way into the sink,
“and, worst of all, in the new made streets occupants can be
“found throwing slops on to the pavement, and even excremental
“matter into the channels. Warning notices have been posted at
“different times urging attention to these matters, with little
“effect. Nothing but vigorous prosecution, with a fine, can
“prevent this, and every effort should be made to secure a few
“convictions as a warning.”

Housing.—(a) New Houses: The demand for houses exceeds the supply. Three hundred and twenty-two new houses were certified as fit for habitation, and plans for 1,252 were approved—in the townships of Blackhalls (546), Horden (325), New Seaham (83), South Hetton (60), Easington Colliery (57), &c. New bye-laws for streets and buildings and cleansing have been sanctioned by the Local Government Board. (b) Insanitary Property: Dr. Arthur states: “Though the old insanitary houses are slowly

“disappearing, there is much yet left. Lots of these have been reported at each meeting, and have been dealt with on a more extensive scale than formerly. The chief structural defects are the attic rooms and the outdoor conveniences, and when, added to this, there was general dilapidation, much less indulgence has been shewn than formerly.” Forty-two statutory notices under the H.W.C. Act were served respecting 103 houses, and decisions were obtained from the magistrates on 10 occasions. As a result, 10 houses were closed—at Easington (6), Haswell (3), and Hutton Henry (1); 4 houses were rebuilt—at Haswell (2) and Thornley (2); 71 houses were repaired or are undergoing repairs—at Easington (16), Haswell (10), Wheatley Hill (2), Thornley (1), Shotton (1), Murton (1), Wingate (22), and South Hetton (18). In addition, certain voluntary improvements were effected by the owners, viz.:—53 houses were closed (39 wooden huts at Horden and 14 houses at Murton)—52 houses were rebuilt (at Haswell (34) and Wingate (18))—and 12 back-to-back two-roomed houses at Murton were converted into 6 through four-roomed houses. Under the P.H. Act 298 statutory notices were served with respect to 986 houses, and except at Murton (114 ash-pit privies to be converted) and in Monk Hesleden (182 ash-pit privies to be converted and 302 yards to be cemented out) the improvements required have already been carried out. During the year 1201 ash-pit privies were substituted by 988 ash-closets at Hutton Henry (356), Murton (223), Seaham (169), Trimdon (124), Monk Hesleden (120), Wheatley Hill (100), South Hetton (64), &c. In 640 instances the conversions were made without recourse to the service of formal notices on the owners.

Nuisances.—In addition to the notices mentioned above 265 informal notices were served with satisfactory results.

Streets.—Streets have been made under the Act at Haswell (2), Station Town (2), and one street at Thornley and another at Wheatley Hill are under construction. The D.C. have decided to make Rodwell Street, Trimdon, having failed to arrive at an arrangement, to do the work conjointly with the Sedgfield D.C.

Plans are to be prepared for the making of streets at Station Town (5) and Easington (2). Dr. Arthur recommends that:—
 “The work of street making should be vigorously forwarded in
 “colliery villages, especially where the back streets are habitually
 “used.”

Common Lodging-houses (2) are situated at Easington and Shotton respectively. Five notices were necessary to enforce cleanliness. Another lodging-house, which was at Easington, has been closed by magistrates’ order.

Dairies and Cowsheds (48).—Twelve additions were made to the register. Forty-eight informal notices were served to enforce ventilation and structural alterations (20) and cleanliness (29). It is stated that:—“The water supply to 18 is from a public company and good—for the remainder a water-course, well or pond
 “is used—not always satisfactory.” New regulations have recently been adopted.

Slaughter-houses.—The report states:—“There are about
 “forty in the district. Many of these are well kept, more are not.
 “The killing process is frequently carried on in the sale shop.
 “They are occasionally visited, but not periodically. In the
 “absence of registration no specific instructions can be given as
 “to how they may be conducted. Only a gross filthy condition,
 “constituting a common nuisance, may be objected to. Fifteen
 “informal notices for such have been served. Pig killing, for sale,
 “may be carried on by anybody of any animal in doubtful
 “condition. One such case was reported, but the parts were
 “disposed of before an inspection could be made.”

Factories (13), *Workshops* (88), *Workplaces* (18), and *Bake-houses* (5) were inspected on 404 occasions. Three notices were served and nuisances with respect to ventilation (15) and overcrowding (7) were abated.

SANITARY REQUIREMENTS.

1.—Prosecution of householders found depositing refuse or slops on the ground.

2.—A vigorous policy with regard to the making of the streets, more especially the back streets in colliery villages.

3.—Registration of slaughter-houses.

4.—The appointment of an additional Sanitary Inspector.

HARTLEPOOL RURAL DISTRICT.

T. G. AINSLEY, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	2,355	2,355
Birth-rate	28·00	22·50
Death-rate	9·34	11·04
Zymotic death-rate.. ..	nil.	1·27
Phthisis death-rate	0·42	nil.
Total Tuberculosis death-rate	0·42	nil.
Respiratory diseases death-rate.. .. .	1·27	1·27
Infant mortality-rate per 1,000 births	45	132

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	23	5
Smallpox	nil.	nil.
Scarlet fever	17	nil.
Diphtheria	6	5
Fevers (Enteric, &c.)	nil.	nil.
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	nil.	nil.
Measles	(nil.)	(nil.)
Whooping cough	(nil.)	(2)
Diarrhoea	(nil.)	(nil.)

Lowest death-rate in the county (see page 6).

GENERAL SANITATION.

Water.—Impure supplies were remedied in 4 instances by cleansing of the wells, and in one instance by sinking a new well.

Sewerage.—The sewers at Greatham require constant flushing and attention.

Housing.—(a) New Houses: 9 were built. (b) Insanitary Property: 7 obsolete closets were replaced by modern arrangements at Greatham.

Dairies and Cowsheds.—Structural improvements were effected in 3 instances, and an improved water supply was provided in 2 instances.

Factories and Workshops were maintained satisfactorily. One nuisance (defective ventilation) was remedied.

The report contains no mention of scavenging, slaughter-houses, of nuisances abated, and there is no reference to the housing. This report is typewritten.

SANITARY REQUIREMENTS.

None mentioned.

HOUGHTON RURAL DISTRICT.

D. S. PARK, F.R.C.S., Medical Officer of Health.

Vital Statistics.

	1909.	
Estimated Population	23,700	—
Birth-rate	38·69	—
Death-rate	14·30	—
Zymotic death-rate	1·89	—
Phthisis death-rate	0·46	—
Total Tuberculosis death-rate	1·18	—
Respiratory diseases death-rate.. .. .	2·53	—
Infant mortality-rate per 1,000 births	116	—

Infectious Diseases—Cases & (Deaths).

	1909.	
Total notifications	190	—
Smallpox	nil.	—
Scarlet fever	120	—
Diphtheria	22	—
Fevers (Enteric, &c.)	34	—
Puerperal fever.. .. .	nil.	—
Cases treated at hospital ..	17	—
Measles.. .. .	(17)	—
Whooping cough	(5)	—
Diarrhoea	(8)	—

GENERAL SANITATION.

Water Supply was satisfactory. Low Newport Farm and the cottages at Plain's Brickyard should be connected with the Sunderland and South Shields Water Company's mains at Durham Road, Silksworth. Water from the well at Coxgreen was analysed and found satisfactory. Samples of water taken from the supplies to 8 dairy farms yielded unsatisfactory analysis, and Dr. Park makes the following recommendations:—"The pipes "should be carefully examined and followed to the spring or tank "and all defects remedied. The tanks themselves should be "cleaned out and properly cemented inside and out, and rammed "on the outside with impervious clay to below the water level. "They should be raised a foot or two above the ground level and "proper pumps should be provided. Should these means fail to "improve the quality of the water, the owners should be called "upon to provide a satisfactory supply."

Sewerage.—Additional tanks and filters have been made to deal with the increase of sewage.

Scavenging was regularly attended to by the contractors, twenty-five in number.

Housing.—(a) New Houses : Plans for 134 houses were passed. (b) Insanitary Property : A special inspection was made of the houses at Middle Rainton scheduled by the County Council as unfit for habitation and as a result 27 houses situated at Gate Row (5), Double Row East (6), Lewis Street (9) and Slate Row (5), &c., have been closed by magistrates' order. Eight of these houses—Gate Row (4) and Double Row East (4)—have since been demolished and the District Council are taking steps to have the remainder similarly dealt with. Improvements are noted to houses at:—Cocken Terrace (general repairs, ashpit privies converted into ash-closets and new coalhouses); Grainger Terrace (general repairs and new ashclosets); Chapel Row, Philadelphia (2 houses rebuilt) and spouting has been renewed to a number of houses in various places. The wooden huts at Stoney Gate are to be replaced by permanent buildings.

Improvements are required at—Johnston's Buildings (cement floors and general repairs, abolition of ashpit privies and pavement of yards); Freehold (general repairs and cement floors, cement yards, new spouting and abolition of open channels and provision of trapped gullies).

Streets.—The contract amounting to £3,489 has been let for making the streets at Old Penshaw and the work has been commenced.

Slaughter-houses were well maintained.

Dairies and Cowsheds were maintained satisfactorily, as were also *Factories and Workshops* (10).

SANITARY REQUIREMENTS.

Improved water supply to certain places mentioned above.

LANCHESTER RURAL DISTRICT.

(Lancaster Division).

J. WILSON, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases & (Deaths).</i>		
	1909.	1908.		1909.	1908.
Estimated Population	23,000	22,570	Total notifications	192	108
Birth-rate	37·82	37·66	Smallpox	nil.	nil.
Death-rate	13·82	15·33	Scarlet fever	117	31
Zymotic death-rate	1·65	2·34	Diphtheria	44	29
Phthisis death-rate	1·04	1·01	Fevers (Enteric, &c.)	13	29
Total Tuberculosis death-rate	1·30	1·68	Puerperal fever.. .. .	nil.	nil.
Respiratory diseases death-			Cases treated at hospital ..	151	84
rate	3·38	3·19	Measles	(4)	(3)
Infant mortality-rate per 1,000			Whooping cough	(7)	(8)
births	132	146	Diarrhoea	(14)	(29)

GENERAL SANITATION.

Water is satisfactorily supplied to the whole district by the Weardale and Consett Water Company.

Scavenging is done by a contractor at Esh, but in the rest of the district by the Colliery Owners, and in a few instances by the occupiers themselves. The refuse is for the most part disposed of on to the land.

Sewerage.—The district is properly sewered and the sewage is purified at the various works, eleven in number. The surface drainage of a portion of Craghead Village requires improvement and it is again recommended that gullies should be provided at Hill Top (near Esh).

Housing.—(a) New Houses: 86 were occupied. (b) Insanitary Property: One house was closed and the owners of certain insanitary property at Ushaw Moor Colliery (The Huts), Malton Colliery (The Huts), Lancaster (Cottages in Blue Bell Yard) have undertaken to close the habitations in question during the present year. One house (owner, Thompson) at Langley Park Colliery Village is to be closed and it is recommended that similar action be taken with respect to a house (owner, Ridley at Hedley Fell

Cottages. One hundred and seventy-five house yards were cemented at Esh Winning (West and North Streets), Hamsteels (South Street), and Esh Winning (Durham and New House Roads). Similar improvements are required at Langley Park Colliery Village (Logan Street and some privately owned property), Craghead (houses owned by Reed) and Esh Winning (East Terrace). At Cornsay Colliery an amount of spouting has been renewed, at Malton Colliery the gullies have been re-laid, and in Westwood Row and Stone Row, Burnhope, ash-closets have been erected. Ashpit-privies in East and West Street, Langley Park Colliery Village; William Street, Ushaw Moor Colliery Village; and South Street, Hamsteels Colliery, should be replaced by ash-closets, and improvements are necessary to the conveniences at Durham Street, Langley Park Colliery Village (ash-closets with defective roofs). Altogether during the year 135 ash-closets were erected in place of ashpit-privies.

Nuisances.—686 were detected and 658 were abated. Three cases of over-crowding were abated and 14 other cases are being dealt with.

Dairies and Cowsheds.—There are 58 cowkeepers in the district. New regulations prescribing a minimum space of 600 cubic feet per cow should be adopted. Dr. Wilson also points out that accumulations of manure in the vicinity of byres ought not to be permitted.

Slaughter-houses were regularly inspected.

Workshops (5) were inspected on 10 occasions.

SANITARY REQUIREMENTS.

1.—Sewerage of Hill Top.

2.—Cementing of yards and abolition of ashpit-privies, as detailed above.

LANCHESTER RURAL DISTRICT.

(Medomsley Division).

W. T. BOLTON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	9,109	8,932
Birth-rate	32·27	32·6
Death-rate	14·60	14·10
Zymotic death-rate	1·09	2·24
Phthisis death-rate	0·98	0·67
Total Tuberculosis death-rate	2·30	0·89
Respiratory diseases death- rate	2·52	2·57
Infant mortality-rate per 1,000 births	105	123

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	66	25
Smallpox	nil.	nil.
Scarlet Fever	39	14
Diphtheria	15	3
Fevers (Enteric, &c.)	5	5
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	44	16
Measles	(nil.)	(nil.)
Whooping cough	(3)	(nil.)
Diarrhœa	(3)	(17)

GENERAL SANITATION.

Water.—The report states that the more populous parts of the district are well supplied with water, but Knitsley Station and a number of farms, especially at those places where dairy cattle are kept, are very unsatisfactorily supplied.

Sewerage.—The district is well sewered, and the sewage is treated at several works.

Scavenging was, on the whole, well attended to by the colliery owners and occupiers of private property.

Housing.—(a) New Houses: 48 were built and occupied. (b) Insanitary Property: 41 ash-closets and 12 water-closets were substituted for ashpit-privies. Improvements are noted to the following properties:—Derwentside Milkwell Burn Cottages (cement floors, reconstruction of the attics and provision of through ventilation); Derwent Cottages (25 cottages reconstructed; the remaining cottages should be dealt with similarly); Hamsterley Colliery (erection of ash-closets and improvements to the lighting and ventilation of certain cottages). Three houses at Hamsterley Colliery (near the Coal Depot), having defective and damp walls and floors, require attention, and insanitary conveniences at Allendale Cottages and Ebchester should be abolished.

Nuisances.—390 were detected, and most of them were abated.

Streets.—Templetown back street has been scheduled, and is to be made. The main road at Stannefordham Cottages has been widened. It is again recommended that the back streets in the various villages should be made.

Slaughter-houses were periodically inspected.

Dairies and Cowsheds.—"There is need for improvement in "the structural and sanitary condition of the cowsheds and their "surroundings."

Factory (1) was inspected on 2 occasions.

SANITARY REQUIREMENTS.

1.—Improvements to the houses mentioned in the report.

2.—Abolition of ashpit-privies (mentioned above).

3.—The making of the back streets.

4.—Improvements to the cowsheds and a better water supply for the dairy farms.

SEDGEFIELD RURAL DISTRICT.

FREDERICK HUNTON, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	31,875	29,710
Birth-rate	34·13	36·85
Death-rate	13·33	16·02
Zymotic death-rate	0·75	2·55
Phthisis death-rate	0·69	0·84
Total Tuberculosis death-rate	1·47	1·11
Respiratory diseases death-rate.. .. .	1·38	3·16
Infant mortality-rate per 1,000 births	139	160

Infectious Diseases—Cases & Deaths .

	1909.	1908.
Total notifications	140	213
Smallpox	nil.	nil.
Scarlet fever	70	121
Diphtheria.. .. .	24	25
Fevers (Enteric, &c.)	23	44
Puerperal fever.. .. .	3	nil.
Cases treated at hospital ..	28	44
Measles.. .. .	nil.	(2)
Whooping cough	(4)	(20)
Diarrhœa	(11)	(37)

GENERAL SANITATION

Water supply was satisfactory. One well yielding an unsatisfactory supply was condemned.

Sewerage.—1,100 yards of new sewers were laid. Ferryhill is being connected with the North Side Works and the contracts for the extension of the Chilton and Windlestone Row Works have been let.

Housing.—Insanitary Property: 60 formal notices under the H.W.C. Act were served and received attention. Three closing orders with respect to 17 houses were granted. Six houses at Ferryhill reported in June, 1908, by the Medical Officer of Health have been scheduled by the County Council in default of action being taken by the D.C. Ashclosets were substituted for 43 ashpit-privies.

Streets.—Dr. Hunton, alluding once more to the “deplorable condition of the colliery townships,” says:—“Beyond the fact that certain streets have been scheduled for the much needed improvement, nothing of a practical nature has been done. These townships cannot be immune very much longer from a severe epidemic; more suitable hotbeds for the growth of bacteria (given a warm, moist summer) it would be difficult to find, and it seems to be the very negation of common sense to burden the community with so many salaried officials for investigating the health conditions of the inhabitants, when outside the doorsteps of their dwellings the blackest of filth, collections of garbage, ashes, and other refuse, are fouling the very atmosphere which they breathe. I am well aware of the many formalities which had to be complied with, but allowing for the law’s delay, to say nothing of the Local Government Board, 13 years is a long period of time to have had the matter under your consideration, and I cannot but regret that it has borne so little fruit.”

Nuisances.—464 were abated.

Common Lodging-houses were regularly inspected, and were maintained fairly satisfactorily.

Workshops (45) were inspected 90 times, and notice was served for an insanitary ash-closet.

Cowsheds.—139 notices were served to enforce cleanliness and limewashing.

SANITARY REQUIREMENTS.

Systematic action for the improvement or closure of insanitary dwellings. Improvements to the streets are urgently needed.

SOUTH SHIELDS RURAL DISTRICT.

W. ARMSTRONG, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	12,147	12,002
Birth-rate	33·01	33·32
Death-rate	14·90	17·58
Zymotic death-rate	1·72	2·33
Phthisis death-rate	0·98	1·41
Total Tuberculosis death-rate	1·96	2·66
Respiratory diseases death-rate.. .. .	1·81	2·41
Infant mortality-rate per 1,000 births	148	140

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	90	87
Smallpox	nil.	nil.
Scarlet fever	43	29
Diphtheria	23	23
Fevers, (Enteric, &c.)	3	20
Puerperal fever.. .. .	1	1
Cases treated at hospital ..	31	25
Measles.. .. .	(nil.)	(4)
Whooping cough	(13)	(1)
Diarrhoea	(4)	(13)

GENERAL SANITATION.

Water is supplied by the Sunderland and South Shields Water Company to the whole of the district, except a few outlying farms, some of which are unsatisfactorily supplied from wells.

Sewerage.—Dr. Armstrong again remarks “that the district is “insufficiently drained and sewered. In particular a new sewer “is required at Boldon. The sewage is discharged into the Tyne “or the sea.”

Scavenging was on the whole well done by the contractors. The refuse is disposed of on land, except at Boldon Colliery, where a tip situated between Brockley Whins and Hedworth is used.

Housing.—(a) New Houses: 65 were built at—Boldon (40), Whitburn (3), Cleadon (10), Boldon Colliery (12), and 29 were occupied. (b) Insanitary property: Some houses in Chicks Lane and Stafford's Lane have been scheduled for closing. A number of houses are reported as having been repaired at Boldon, Whitburn, and Monkton. At Boldon Colliery 147 houses, situated in Heckles Row (53), Toppings Row (52), New Street (8), Davison Street (15), Church Street (14), and South Church Street (5) require repointing and the provision of cement footpaths along the fronts of the houses as a protection to the foundations is recommended.

Nuisances.—125 were abated, 47 formal notices being served.

Streets.—A number of back streets at East Boldon, and on the Bede Estates, Whitburn, require to be made, and asphalt footpaths are required in three streets at Boldon Colliery.

Dairies and Cowsheds (85) were in most instances found satisfactory. Three farms have an unsatisfactory water supply, and should be connected with the public supply. Three other farms were found to be in an unsatisfactory condition, and steps are being taken for their improvement.

Slaughter-houses (6) were maintained fairly satisfactorily. Seven notices were served to enforce cleanliness. Dr. Armstrong states:—"Owing to a nuisance constantly occurring from the "accumulation of offal, the Council are going to undertake its "removal for a small fee."

Factories and Workshops (15) were inspected on 21 occasions. Five notices were served to enforce cleanliness (2), provision of proper sanitary accommodation (2), and with satisfactory results.

SANITARY REQUIREMENTS.

- 1.—Improvements to the houses and streets as detailed above.
- 2.—Pure water supply for certain dairy farms.

3.—Extension and improvements to the sewerage system.

4.—Construction of an additional pavilion at the Fever Hospital for the treatment of diphtheria or doubtful cases of infectious disease.

STOCKTON RURAL DISTRICT.

J. W. BLANDFORD, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	19,081	19,081
Birth-rate	24·84	29·55
Death-rate	12·47	12·99
Zymotic death-rate	2·04	0·68
Phthisis death-rate	0·41	1·10
Total Tuberculosis death-rate	0·68	1·67
Respiratory diseases death-rate.. .. .	2·04	1·51
Infant mortality-rate per 1,000 births	122	95

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	97	105
Smallpox	nil.	nil.
Scarlet fever	49	29
Diphtheria	27	49
Fevers (Enteric, &c.)	11	10
Puerperal fever.. .. .	1	3
Cases treated at hospital ..	34	47
Measles.. .. .	(17)	(2)
Whooping cough	(12)	(2)
Diarrhoea	(5)	(4)

GENERAL SANITATION.

Water was supplied plentifully by the Tees Valley Water Board to the greater part of the district. This company improved the supply to Wolviston by making a loop connection with the Wynyard Main. At Cowpen Bewley and other places in the agricultural area which is dependent on pumps the supply was plentiful.

Sewerage.—The irrigation works at Stillington have been improved by the addition of ashes to the clay soil. A proposed scheme for the township of Norton includes “the relaying of the “sewer down the High Street of Norton, and a pumping station “to deal with the drainage from Beaconsfield Street, with a “continuation down Portrack Lane to the River. Part of the “Parish of Norton up Durham Road is not included in this

“scheme of drainage, and the houses at present drain into cess-pools, but proper drainage will have to be considered to accommodate this area.”

Scavenging was well done by contractors in the various villages.

Housing.—(a) New Houses: 44 were built in the parish of Norton, (18) Billingham (17) and in the agricultural area (9). Subsidences due to the salt workings are still occurring at Haver-ton Hill.

Slaughter-houses (12) were inspected regularly.

Dairies, Cowsheds (66) were inspected regularly. Dr. Blandford says:—“The cows are generally included in long byres with their heads facing the wall, and breathing the breath of each other. It is my opinion that as long as this system continues the amount of tubercular disease in dairy cattle will always be large.” The report of the Inspector which is appended states that new floors were laid in two byres and that a byre at Burton Farm, Hartburn, is to be rebuilt. The provision of a water supply to several farms near Two Mile Houses from the Tees Valley Water Board’s main is under consideration. Thirty-one notices were served for the abatement of nuisances in connection with cowsheds.

Improvements made or required to insanitary property and nuisances abated are not mentioned in the report. There are no common lodging-houses in the district.

Workshops (21) and *Premises of Outworkers* (2) were inspected on 48 occasions. Eight nuisances (want of cleanliness (2) and ventilation (1), defective sanitary accommodation, &c.) were detected and remedied.

SANITARY REQUIREMENTS.

None mentioned.

SUNDERLAND RURAL DISTRICT.

ROBERT STOBO, M.B., B.Hy., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	30,129	29,511
Birth-rate	33·58	33·61
Death-rate	13·14	15·82
Zymotic death-rate	1·36	3·04
Phthisis death-rate	0·69	0·78
Total Tuberculosis death-rate	1·29	1·35
Respiratory diseases death-		
rate... .. .	2·29	3·21
Infant mortality-rate per 1,000		
births	117	152

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	258	152
Smallpox	nil.	nil.
Scarlet fever	150	64
Diphtheria	42	25
Fevers (Enteric, &c.)	39	38
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	89	64
Measles.. .. .	(13)	(21)
Whooping cough	(1)	(22)
Diarrhoea	(16)	(39)

Reduction in the death-rate (see page 5). Enteric fever and midden privies (see page 22). Advantages of Health Visitor (see page 11). Prevention of Consumption (see page 34).

GENERAL SANITATION.

Water.—Practically the whole of the district is supplied by the Sunderland and South Shields Water Company. A proper supply is needed for three outlying farms in the parish of Tunstall and in two instances it has been agreed to connect with the public supply.

Scavenging was on the whole fairly well done. Dr. Stobo states:—“Irregularity of work and fouling of the streets are the “two greatest dangers to overcome. In both respects some “improvement might be expected from some of the Contractors.”

Sewerage.—The system in the parish of Tunstall is defective, the joints being made of clay and no proper ventilation exists.

Housing.—(a) New Houses: 178 were erected in the parishes of Ford (8), Fulwell (9), Hylton (3), Ryhope (88), and Tunstall (70). The houses erected in the parishes of Ryhope and Tunstall by the D C. are now in occupation. (b) Insanitary Property: 38 notices were served under the H.W.C. Act respecting 38 dwellings, 13 of which have been made habitable. 118 ashclosets and 14 water-closets were substituted for ashpit-privies in the townships

of Ford (1), Fulwell (3), Ryhope (41), and Tunstall (87). The report states that many of the existing houses in the parish of Ryhope are far from satisfactory. Dr. Stobo especially calls attention to Alice Street and Queen Street where the yards are in a most insanitary condition.

Streets.—Improvements are being made in the townships of Hylton and Fulwell. It has also been resolved to pave the foot-paths at New Silksworth. Dr. Stobo recommends that the streets should at the same time be paved with some impermeable material.

Dairies and Cowsheds.—A standard of lighting in cowbyres has been fixed. In old byres a lighting surface of not less than $\frac{1}{40}$ th and in new byres not less than $\frac{1}{20}$ th of the floor space is required. Out of 41 cowsheds 31 were found to be below this standard, and notices have been served requiring the necessary improvements to be made. The cows (about 500) were examined by Mr. Mitchell (Veterinary Surgeon) and 7 cows suffering from tuberculosis of the udder were detected. Dr. Stobo states:—
 “About two-fifths of the cows in the Sunderland Rural District
 “are tested by tuberculin either before or after purchase, and a
 “veterinary surgeon’s certificate obtained that they are free from
 “tuberculosis. It is satisfactory to report that the dairy farmers
 “in the district adopting this procedure are steadily increasing,
 “and we hope that it will soon become the rule.”

Nuisances.—459 were abated by the service of 271 informal and 270 formal notices.

Factories (29) and Bake-houses (18) were inspected on 64 occasions, and 21 notices were served. Failure to exhibit the extract was detected in 18 instances and they were reported to the Factory Inspector. In two bake-houses notices were served to substitute paint or limewash for paper on the walls.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing in the parish of Ryhope.
- 2.—Making and paving of streets.

3.—Ventilation and improvements to the sewerage system in the parish of Tunstall.

4.—Removal of cases of enteric fever to the Isolation Hospital from houses without a water-closet and from houses without accommodation for efficient isolation.

5.—Additional hospital accommodation for diphtheria.

WEARDALE RURAL DISTRICT.

(Derwent Division.)

ANDREW VEITCH, M.D., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	460	450
Birth-rate	26·08	11·11
Death-rate	19·56	20·00
Zymotic death-rate	nil.	nil.
Phthisis death-rate	nil.	nil.
Total Tuberculosis death-rate	nil.	nil.
Respiratory diseases death-rate.. ...	2·17	2·22
Infant mortality-rate per 1,000 births	nil.	200

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	1	1
Smallpox	nil.	nil.
Scarlet fever	1	nil.
Diphtheria	nil.	1
Fevers (Enteric, &c.)	nil.	nil.
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	No hospital.	
Measles.. .. .	(nil.)	(nil.)
Whooping cough	(nil.)	(nil.)
Diarrhoea	(nil.)	(nil.)

GENERAL SANITATION.

Water.—Natural springs are numerous, and the water is good and abundant. Edmondbyres and Ruffside have public supplies.

Scavenging.—The refuse is satisfactorily disposed of as manure or is thrown on to waste land on the moors. There are two water-closets in the district, the rest of the houses being provided with privies.

Housing.—Dr. Veitch says :—“ This is ample. Many of the “houses are unoccupied. A few of the older houses are built “back-to-back.”

Nuisances.—No complaints were received.

Milk Supply.—There are no milkshops, though milk is disposed of in small quantities to neighbours by persons who keep cows.

There are no lodging-houses, slaughter-houses, factories, or workshops.

SANITARY REQUIREMENTS.

None mentioned.

WEARDALE RURAL DISTRICT.

(Stanhope Division.)

JAMES BANNERMAN, M.B., Medical Officer of Health.

<i>Vital Statistics.</i>				<i>Infectious Diseases—Cases & (Deaths).</i>			
	1909.	1908.			1909.	1908.	
Estimated Population	2,615	2,615		Total notifications	13	9	
Birth-rate	27·53	27·53		Smallpox	nil.	nil.	
Death-rate	16·44	11·08		Scarlet fever	nil.	1	
Zymotic death-rate	0·76	nil.		Diphtheria	7	4	
Phthisis death-rate	1·52	0·76		Fevers, (Enteric, &c.)	nil.	1	
Total Tuberculosis death-rate	2·67	1·14		Puerperal fever	nil.	nil.	
Respiratory diseases death-				Cases treated at hospital ..	No hospital.		
rate.. .. .	2·29	0·76		Measles.. .. .	(nil.)	(nil.)	
Infant mortality-rate per 1,000				Whooping cough	(nil.)	(nil.)	
births	14	55		Diarrhoea	(nil.)	(nil.)	

GENERAL SANITATION.

Water supplied by the Council was abundant. At Buckler Dale two farms have been connected with the Council's main.

Sewerage.—The works at Frosterley, Hill End, Crawleyside, and Rookhope acted satisfactorily.

Housing.—New houses were built at Frosterley (2), and Rookhope (2).

Nuisances.—A few nuisances were reported and abated.

Factories (1 whinstone and 7 limestone quarries) were conducted satisfactorily.

SANITARY REQUIREMENTS.

None mentioned.

WEARDALE RURAL DISTRICT.

(St. John's Division).

JOHN EASTON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	3,186	3,186
Birth-rate	21·34	21·02
Death-rate	19·77	17·26
Zymotic death-rate	1·57	nil.
Phthisis death-rate	1·57	1·25
Total Tuberculosis death-rate	3·14	1·25
Respiratory diseases death-rate	1·25	0·94
Infant mortality-rate per 1,000 births	102	134

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	12	5
Smallpox	nil.	nil.
Scarlet fever	4	2
Diphtheria	3	1
Fevers (Enteric, &c.)	nil.	nil.
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	No hospital.	
Measles	(nil.)	(nil.)
Whooping cough	(4)	(nil.)
Diarrhoea	(nil.)	(nil.)

GENERAL SANITATION.

Water Supply was satisfactory. The Cowshill water tank was enlarged, and a tank which allowed of pollution of the New-house water was repaired.

Sewage Disposal.—Land has been provided for the disposal of the sewage of Ireshopeburn.

Housing.—New Houses: 4 were erected at—Westgate (1), Wearhead (2), and St. John's Chapel (1).

Cowsheds.—One new byre was erected, and one farm provided with a new dairy.

SANITARY REQUIREMENTS.

1.—Proper refuse tips for the different villages.

2.—The continuance of the work of improving the cowbyres.

3.—The distribution to the public of information as to the prevention of consumption.

WEARDALE RURAL DISTRICT.

(Wolsingham Division).

R. H. O. GARBUTT, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1909.	1908.
Estimated Population	3,600	3,600
Birth-rate	22·77	22·50
Death-rate	11·11	15·27
Zymotic death-rate	nil.	0·55
Phthisis death-rate	0·55	0·83
Total Tuberculosis death-rate	1·10	1·94
Respiratory diseases death-rate	1·94	2·50
Infant mortality-rate per 1,000 births	85	98

Infectious Diseases—Cases & (Deaths).

	1909.	1908.
Total notifications	70	7
Smallpox	nil.	nil.
Scarlet fever	67	nil.
Diphtheria	1	4
Fevers (Enteric, &c.)	nil.	1
Puerperal fever.. .. .	nil.	nil.
Cases treated at hospital ..	No hospital.	
Measles	(nil.)	(1)
Whooping cough	(nil.)	(nil.)
Diarrhoea	(nil.)	(1)

GENERAL SANITATION.

Water from the Weardale and Consett Company's mains has been laid on to several houses, bringing the total number of houses thus supplied up to 507. High Wiserley Farm is still without a proper water supply.

Sewerage.—The sewers were regularly flushed.

Scavenging was done fairly satisfactorily by the contractor.

Housing.—New Houses : 4 were erected.

Nuisances.—A few arose in connection with insanitary yards and privies, and were in most instances abated.

Cowsheds.—Improvements are required to the cowbyres in the Elm Park district, and notices have been served on the owners to make the same.

Factories and Workshops were maintained satisfactorily.

SANITARY REQUIREMENTS.

An improved water supply to High Wiserley Farm.

PORT SANITARY DISTRICTS.

HARTLEPOOL PORT.

S. BIGGART, M.D., Medical Officer of Health.

Hospital.—The number of patients admitted into hospital was 107 as compared with 31 in the previous year. Of these only two were removed from vessels, viz., one case of beri beri and one case of asiatic cholera, the remainder being patients from the Boroughs of West Hartlepool (97) and Hartlepool (8). Dr. Biggart states that:—"The hospital is in good sanitary condition and repair and that it is capable of meeting the requirements of the locality. The case mortality was 3·7 per 100 as compared with 9·6 per 100 in 1908."

Inspection of Ships.—Two cases of infectious disease, as mentioned above, were imported by vessels arriving at the port. One hundred and fifty-one vessels were inspected by the Medical Officer of Health and there were 11 re-visits; the vessels inspected included 33 with cases of sickness on board, 111 which came from suspected or infected ports, 5 with sanitary defects and 2 with stowaways on board. A number of ships arrived from the Baltic and North Sea ports during the year and, in view of the epidemic of cholera in Russia, careful attention was given to these ships and their crews. The number of vessels inspected by the Port Sanitary Inspectors was 1664 and there were 278 re-visits, the nationality of the vessels numbering 751 British, 311 Swedish, 193 Norwegian, 146 Danish, 115 German, and 54 Russian, &c.

Structural and Sanitary Defects.—Seventy-eight ships were cleansed. Three verminous forecastles and 8 lots of dirty bedding were dealt with. 243 notices were served regarding nuisances and structural defects and were attended to except in two instances.

RIVER TYNE PORT.

W. EDMUND HARKER, M.D., D.Hy., Medical Officer
of Health.

Diseases on Shipboard.—The following cases were reported :—

	On voyage.	On and after arrival.
Smallpox and suspected smallpox..	13	2
Measles	2	—
Typhus fever	1	—
Scarlet fever	1	—
Enteric fever	13	4
Cholera	2	—
Choleraic diarrhœa, etc.	39	6
Malarial fever	26	6
Dysentery	4	1
Beri Beri	7	43
Influenza	18	

Fifty-five vessels were visited by the Medical Officer of Health on account of reported or suspected sickness, and a list of the vessels so boarded, and giving their nationality, port of departure, nature of sickness, and general remarks, is tabulated in the report.

During the year 55 cases were treated in the Floating Hospital (all removed from vessels). One case of enteric fever and one case of beri-beri ended fatally.

Vessels from Infected or Suspected Ports.—1783 vessels were boarded by the Port Officers on account of their coming directly, or otherwise, from foreign ports infected, or suspected to be infected, with cholera, yellow fever, plague, or small-pox. The names of the infected or suspected ports are given in the report.

Emigrants.—The number of known emigrants passing through the port during 1909 was 6,558, and they were all bound for America. All emigrant vessels were inspected and kept under

supervision, and information as to emigrants debarking and proceeding overland to other British ports continues to be forwarded to the respective ports.

General Sanitary Work.—The number of vessels inspected by the Port Inspectors was 10,270, and, in addition, visits to 18 water-boats were paid. Of the vessels inspected, 6,157 were British, the others including 1,111 Norwegian, 803 German, 680 Danish, 455 Swedish, 321 Spanish, and 292 Dutch. In 438 vessels there were structural defects and 322 were in a dirty condition. Details of structural defects are given in the report. 1,766 vessels coming from foreign ports were inspected. Special cargoes inspected numbered 991, the majority of the cargoes (757) being fish. Four cargoes of frozen meat were inspected.

Water Supply.—The water-boats were examined as usual and their tanks found to be in good condition, while the drinking water of 46 vessels which came from ports infected, or suspected to be infected, with cholera, was changed and the tanks purified.

Disinfection.—41 vessels and several lots of clothing and bedding were disinfected, while 412 old beds were burnt and three lots of filthy clothing destroyed on account of infection.

Four smoke nuisances were detected, and the offender in each instance was communicated with, while the cleansing of foul fishing-boats and cattle-ships was performed as usual under the supervision of the Inspectors.

TABLE A.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE URBAN DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

URBAN DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population 1909 (Estimated).	Births.	Deaths.	Birth-rate	Death- rate.	Zymotic death- rate.	Infant Mortality- rate per 1,000 Births.	Phthisis death- rate.	Lung Diseases death- rate.	Number of Cases Notified.	Hospital accommo- dation?	Number of cases removed to Hospital.	Percent- age of Notified cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.
BOROUGHS.																	
Darlington ..	J. Lawrence, M.D. ..	3956	52000	1511	714	29.05	13.73	0.96	101	0.86	1.71	154	Yes	112	72.7	16	14
Durham ..	A. M. Vann, M.R.C.S. ..	1065	17200	434	286	25.23	16.62	0.69	135	1.04	2.58	66	Yes	36	54.5	73	4
Hartlepool ..	J. Rawlings, M.R.C.S. ..	735	24000	620	321	25.83	13.37	0.91	106	0.58	2.45	68	Yes	7	10.3	27	41
Jarrow ..	J. M. Nicoll, M.B. ..	1064	31815	1024	573	29.41	16.60	1.37	148	1.26	4.19	126	Yes	28	22.2	5	67
Stockton ..	Thomas Horne, M.D. ..	3031	53660	1431	753	26.48	14.03	1.24	121	0.83	2.01	312	Yes	232	74.3	22	9
URBAN DISTRICTS.																	
Annfield Plain ..	T. Bensou, L.R.C.P. ..	3489	16200	584	218	36.04	13.45	1.60	113	0.61	2.59	118	Yes	58	49.1	..	18
Barnard Castle ..	A. H. Sevier, M.B. ..	560	4572	97	66	21.21	14.65	0.65	92	1.53	1.53	21	Yes	3	14.3	17	3
Bonfieldside ..	Wm. Allen, M.D. ..	1525	7700	257	125	33.37	16.23	1.30	81	1.42	1.56	31	Yes	13	41.9	..	..
Bishop Auckland ..	T. A. McCullagh, M.R.C.S. ..	691	18306	418	228	31.41	17.13	0.90	117	1.12	2.40	89	Yes	16	17.9	46	2
Blaydon ..	H. Morrison, M.B., B.S., B.Hy.	9323	28000	1129	378	40.32	13.50	1.53	117	1.14	1.35	277	Yes	187	67.5	3	10
Brandon & Byshottles	H. Smith, M.D. ..	6669	18297	638	264	34.86	14.42	1.09	123	0.87	2.51	326	Yes	109	33.4	..	12
† Chester-le-Street ..	D. Duncan, M.B. ..	2511	15174	512	197	33.73	12.98	1.84	115	0.39	2.04	74	Yes†	23	31.0	23	..
Consett ..	A. D. M. Macintyre, M.B. ..	1005	11157	322	182	28.86	16.31	1.25	121	0.89	3.04	30	Yes	1	3.3	1	18
Crook ..	A. Mackay, M.D. ..	4056	11800	412	153	34.91	12.96	0.92	92	1.10	2.37	88	Yes	42	47.7	..	6
Felling ..	W. E. Peacock, M.D., B.Hy. ..	2684	27622	817	333	29.57	13.97	1.33	143	1.08	2.75	279	Yes	Nil.	Nil.	3	23
Hebburn ..	A. M. G. Walker, L.R.C.P. ..	1241	23577	796	335	33.75	14.25	1.82	126	1.14	1.56	133	Yes	77	57.9	..	35
Hetton-le-Hole ..	J. Adamson, M.D. ..	1617	14800	542	205	36.62	13.85	1.75	112	0.40	2.09	52	Yes	7	13.4	..	9
Houghton-le-Spring ..	D. S. Park, F.R.C.S. ..	1551	9800	383	127	39.08	12.96	1.22	99	1.12	2.14	61	Yes	20	32.8	9	4
Leadgate ..	Wm. Allen, M.D. ..	1836	4800	171	80	35.62	16.66	1.04	163	0.81	4.37	11	Yes	3	27.2	..	..
Ryton ..	James W. Smith, M.D. ..	5169	11890	450	145	37.84	12.19	0.92	106	0.58	1.26	124	Yes	34	27.4	..	2
Seaham Harbour ..	L. Gerald Dillon, M.D. ..	1101	14000	550	199	39.28	14.21	2.14	136	0.78	1.92	41	Yes	16	39.0	4	11
Shildon ..	S. Fielden, M.D. ..	1066	13977	456	196	32.62	14.02	1.43	96	0.95	2.07	104	Yes	61	58.6	..	9
Southwick-on-Wear ..	John J. Carruthers, M.B. ..	856	15148	501	215	33.07	14.19	1.58	117	0.52	3.23	88	Yes	62	70.4	..	39
Spennymoor ..	W. Mussellwhite, M.R.C.S., D.P.H.	3388	16900	686	313	40.59	18.52	2.71	171	1.24	3.61	116	Yes	80	68.9	..	20
Stanhope ..	John Gray, M.B. ..	216	2010	43	22	21.34	10.94	Nil.	116	2.93	2.48	3	No*	Nil.	Nil.	8	..
Stanley ..	T. Benson, L.R.C.P. ..	3593	21500	775	504	36.04	23.44	1.58	138	0.88	3.25	255	Yes	180	70.5	..	28
Tanfield ..	T. Benson, L.R.C.P. ..	4779	10100	363	125	35.94	12.37	1.28	121	0.79	1.78	154	Yes	72	46.7	17	4
Tow Law ..	J. H. Neismith, M.D. ..	477	4371	116	60	26.53	13.72	0.68	77	0.45	2.97	58	Yes	30	51.7	..	3
Whickham ..	Andrew Smith, M.D. ..	5914	16719	605	223	36.18	13.33	0.83	95	1.13	1.73	123	Yes	57	46.3	..	15
Willington ..	R. E. Brown, L.R.C.P. ..	3793	7970	276	103	34.62	12.92	0.75	108	0.75	1.13	31	Yes	23	74.2	..	10

* Hospital accommodation for small-pox cases only.

† In this district arrangements have been made by which fever patients may be removed to the hospital belonging to the adjoining rural district council.

‡ The statistics for this new urban district are for the whole year, although the district was only created on the 1st April, 1909.

TABLE A1.

TABLE GIVING THE DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES WITHIN THE URBAN DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

URBAN DISTRICTS.	DEATHS AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																																	
	At all ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria & Membranous Croup.	Croup.	Fevers.				Typhus.	Enteric.	Other Contag.	Epidemic Influenza.	Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Chronic of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.
Darlington	714	154	77	25	22	222	214	..	..	2	23	4	..	..	4	..	4	7	2	2	1	4	45	32	33	64	21	4	26	5	1	24	4	59	14	5	324
Durham	236	59	26	8	8	91	94	..	3	..	..	..	..	..	..	..	..	9	2	..	1	..	18	23	14	24	19	1	3	2	..	9	..	32	9	4	113
Hart'epool	321	66	55	19	18	89	74	..	15	1	1	1	1	..	..	..	2	4	2	1	..	..	14	22	17	48	10	1	..	1	..	11	2	41	9	2	115
Jarrow	578	152	90	21	30	170	115	..	12	1	20	9	2	..	1	..	5	5	2	2	2	..	44	35	25	61	82	3	5	2	5	25	3	49	13	..	165				
Stockton	766	172	106	45	31	226	186	..	31	3	13	5	..	..	2	..	14	18	1	..	1	..	45	61	42	54	50	4	9	8	1	33	4	51	36	2	278		
Annfield Plain ..	218	66	33	16	4	55	44	..	4	2	..	4	2	..	3	..	..	13	..	..	..	..	10	11	5	23	18	1	4	2	1	7	3	11	4	..	90
Barnard Castle ..	83	9	2	1	5	23	43	..	1	..	..	1	1	..	..	..	1	1	1	..	..	..	7	1	10	3	3	1	3	1	..	4	2	22	2	..	18
Benfieldside	125	21	17	5	2	51	29	..	2	..	3	..	..	..	..	..	1	5	..	..	..	..	11	11	9	6	6	..	..	..	2	2	22	..	..	45	
Bishop Auckland ..	228	49	17	8	11	76	67	..	..	..	2	1	..	..	3	..	4	6	1	..	..	..	15	10	8	18	12	2	..	3	2	5	2	24	12	1	97
Blaydon	331	133	46	19	21	106	56	..	5	5	1	6	2	..	4	..	5	25	3	..	1	..	32	19	15	7	30	1	5	2	4	28	5	25	21	5	125				
Brandon & Bysbottles	264	79	29	16	14	76	50	..	..	2	2	5	..	..	1	..	2	13	4	..	..	..	16	7	14	16	29	1	2	2	1	16	4	21	8	3	95
Chester-le-Street ..	197	59	34	8	8	42	46	..	5	3	6	3	..	..	1	..	..	10	3	..	..	..	6	9	6	10	21	..	..	1	..	8	11	22	7	2	63
Consett	182	39	29	7	11	67	29	..	4	..	6	..	1	..	..	..	4	1	..	..	..	..	10	6	4	7	27	..	5	3	..	8	1	19	4	..	72
Crook	153	38	12	7	7	47	42	..	1	3	..	..	..	..	..	..	1	7	4	..	..	..	13	9	9	13	15	..	..	..	..	8	2	15	5	..	48
Felling	366	117	59	10	21	90	69	..	13	4	3	5	..	..	1	..	..	11	4	..	1	..	30	26	19	23	53	..	..	..	..	46	3	21	9	2	92
Hebburn	335	101	50	18	10	107	49	..	14	1	12	3	..	..	5	..	2	8	2	..	..	..	27	11	14	12	24	1	1	1	..	25	1	39	16	1	115
Hetton-le-Hole ..	205	61	28	6	7	59	44	..	11	1	..	1	..	..	1	..	1	12	2	..	..	..	6	9	14	9	20	2	2	2	..	29	3	15	3	..	62
Houghton-le-Spring..	127	38	21	7	7	28	26	..	5	..	2	3	..	..	2	..	..	..	1	..	..	..	11	8	9	3	18	..	..	..	4	1	12	2	1	45	
Leadgate	80	28	8	2	5	22	15	..	1	1	..	..	..	..	..	..	3	..	..	..	..	..	4	6	6	7	14	..	..	1	..	8	..	9	1	..	19
Ryton	145	48	18	4	6	41	28	..	1	..	1	2	..	..	1	..	1	7	..	1	..	..	7	11	4	10	5	..	3	1	1	16	1	14	5	1	52
Seaham Harbour ..	199	75	32	11	7	47	27	..	16	..	..	2	..	..	4	..	2	8	..	..	..	..	11	17	5	7	20	..	..	..	..	21	2	15	7	..	62
Shildon	196	44	28	12	6	61	45	..	7	1	..	2	2	..	1	..	2	9	..	..	..	..	13	10	11	21	7	1	..	1	..	8	1	24	9	..	66
Southwick-on-Wear..	215	59	43	7	8	63	35	..	12	2	..	1	..	..	3	..	..	6	..	..	..	1	8	1	5	27	22	..	..	1	..	18	2	18	9	4	75
Spennymoor	313	118	35	10	14	80	56	..	14	..	..	2	1	..	1	..	2	29	3	2	..	..	21	6	9	30	28	3	1	5	1	17	5	26	8	..	99
Stanhope	22	5	..	2	1	5	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	2	3	..	..	..	..	1	..	3	1	..	9
Stanley	504	107	65	30	101	156	45	..	5	11	4	6	..	..	3	..	..	5	2	..	..	..	19	13	6	23	47	..	5	4	..	17	3	26	173	3	129
Tanfield	121	44	19	4	10	27	17	..	4	..	1	3	..	..	1	..	..	4	3	2	..	..	8	8	4	6	11	1	..	..	..	5	..	11	2	..	47
Tow Law	57	9	5	3	2	24	14	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	2	2	3	11	2	..	..	2	..	..	..	7	2	1	22
Whickham	223	58	24	11	13	72	45	..	4	..	1	3	..	..	..	..	1	6	..	..	1	..	19	12	8	18	10	1	3	..	1	13	3	15	13	1	90
Willington	103	29	9	5	10	28	22	..	1	1	..	1	..	..	2	..	7	1	..	..	..	..	6	3	1	7	2	..	3	..	..	7	4	6	6	..	45
TOTAL	7707	2037	1017	847	420	2251	1635	..	191	46	101	73	12	..	45	..	57	236	43	10	8	5	480	399	330	570	629	28	80	50	18	423	74	674	410	38	2677				

The difference between the total deaths in some districts in this Table and the figures given in Table A. is due to the incompleteness of the statistics in the Annual Reports of the district Medical Officers of Health.

TABLE B.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE RURAL DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population (Estimated).	Births.	Deaths.	Birth-rate	Death- rate.	Zymotic death- rate.	Infant Mortality- rate per 1,000 Births.	Phthisis death- rate.	Lung Diseases death- rate.	Number of Cases Notified.	Hospital accommo- dation?	Number of cases removed to Hospital.	Percent- age of Notified Cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.
Auckland	J. G. Willis, L.R.C.P., D.P.H.	57334	60505	2049	864	33·86	14·27	1·33	128	0·62	2·01	512	Yes	172	33·5	6	39
Barnard Castle ..	James C. Neligan, L.R.C.S.	79961	11974	332	166	27·72	13·82	0·25	117	1·41	1·50	64	Yes	6	9·3	..	15
†Chester-le-Street ..	J. Taylor, M.D., D.P.H.	32429	62739	2361	942	37·63	15·01	1·78	140	0·65	2·64	574	Yes	98	17·0	..	35
Darlington	Robert H. Meikle, M.B.	42019	9591	269	126	28·04	14·38	0·31	104	0·83	1·45	26	Yes†	12	46·1	..	12
Durham	A. T. Harrison, L.S.A.	31053	29301	1046	444	35·09	15·15	1·29	129	0·95	2·59	196	Yes	121	61·7	12	24
Easington	J. Arthur, L.R.C.P., D.P.H.	37018	56922	1984	924	34·85	16·23	2·40	153	0·68	2·26	522	Yes	58	11·1	7	29
Hartlepool	T. G. Ainsley, M.D.	19090	2355	66	22	28·00	9·34	nil	45	0·42	1·27	23	Yes†	nil	nil	151	..
Houghton	D. S. Park, F.R.C.S.	13190	23700	917	339	38·69	14·30	1·89	116	0·46	2·53	190	Yes	17	8·9	..	21
Lanchester (Lanchester Division)	J. Wilson, M.D.	29949	23000	875	318	37·82	13·82	1·65	132	1·04	3·38	192	Yes	151	78·6	57	12
Lanchester (Medomsley Division)	W. T. Bolton, L.R.C.P.	21193	9109	294	133	32·27	14·60	1·09	105	0·98	2·52	66	Yes	44	66·6	..	..
Sedgefield	Frederick Hunton, M.D.	45006	31875	1088	425	34·13	13·33	0·75	139	0·09	1·38	140	Yes	28	20·0	..	..
South Shields ..	W. Armstrong, L.R.C.P.	12073	12147	401	181	33·01	14·90	1·72	1148	0·98	1·81	90	Yes	31	34·4	278	1
Stockton	J. W. Blandford, L.R.C.P.	34539	19081	474	238	24·84	12·47	2·04	122	0·41	2·04	97	Yes	34	35·0	1	12
Sunderland	Robert Stobo, M.B., B.Hy.	6980	30129	1012	396	33·58	13·14	1·36	117	0·69	2·29	258	Yes	89	34·4	17	34
Weardale (Derwent Division)	Andrew Veitch, M.D.	13144	460	12	9	26·08	19·56	nil	nil	nil	2·17	1	No*	nil	..	..	..
Weardale (Stanhope Division)	James Bannerman, M.R.	24864	2615	72	43	27·53	16·44	0·76	14	1·52	2·29	13		nil	..	..	6
Weardale (St. John's Division)	John Easton, L.R.C.P.	36096	3186	68	63	21·34	19·77	1·57	102	1·57	1·25	12		nil	..	..	2
Weardale (Wolsingham Div.)	R. H. O. Garbutt, L.R.C.P.	21552	3600	82	40	22·77	11·11	nil	85	0·55	1·94	70		nil	..	..	..

* This district has hospital accommodation for small-pox cases only.
in the adjoining urban district.

† These statistics exclude the newly created Chester-le-Street urban district.

† In these districts arrangements have been made by which fever patients may be removed to the hospital

|| This rate excludes the deaths under 1 year of age and the births registered in the workhouse.

TABLE B.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &c., WITHIN THE RURAL DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population 1909 (Estimated).	Births.	Deaths.	Birth-rate	Death- rate.	Zymotic death- rate.	Infant Mortality- rate per 1,000 Births.	Phthisis death- rate.	Long Diseases death- rate.	Number of Cases Notified.	Hospital accommo- dation?	Number of cases removed to Hospital.	Percent- age of Notified Cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.
Auckland	J. G. Willis, L.R.C.P., D.P.H.	57334	60505	2049	864	33.86	14.27	1.33	123	0.62	2.01	512	Yes	172	33.5	6	39
Barnard Castle ..	James C. Neligan, L.R.C.S.	79961	11974	332	166	27.72	13.82	0.25	117	1.41	1.50	64	Yes	6	9.3	..	15
† Chester-le-Street ..	J. Taylor, M.D., D.P.H.	32429	62739	2361	942	37.63	15.01	1.78	140	0.65	2.64	574	Yes	98	17.0	..	35
Darlington	Robert H. Meikle, M.B.	42019	9591	269	126	28.04	14.38	0.31	104	0.83	1.45	26	Yes†	12	46.1	..	12
Durham	A. T. Harrison, L.S.A.	31053	29301	1046	444	35.69	15.15	1.29	129	0.95	2.59	196	Yes	121	61.7	13	24
Easington	J. Arthur, L.R.C.P., D.P.H.	37018	56922	1984	924	34.85	16.23	2.40	153	0.68	2.26	522	Yes	58	11.1	7	29
Hartlepool	T. G. Ainsley, M.D.	19090	2355	66	22	28.00	9.34	nil	45	0.42	1.27	23	Yes†	nil	nil	151	..
Houghton	D. S. Park, F.R.C.S.	13190	23700	917	339	38.69	14.30	1.89	116	0.46	2.53	190	Yes	17	8.9	..	21
Lanchester (Lanchester Division)	J. Wilson, M.D.	29949	23000	875	318	37.82	13.82	1.65	132	1.04	3.38	192	Yes	151	78.6	57	12
Lanchester (Medomsley Division)	W. T. Bolton, L.R.C.P.	21193	9109	294	133	32.27	14.60	1.09	105	0.98	2.52	66	Yes	44	66.6	..	..
Sedgefield	Frederick Hunton, M.D.	45006	31875	1088	425	34.13	13.33	0.75	139	0.69	1.38	140	Yes	28	20.0	..	..
South Shields	W. Armstrong, L.R.C.P.	12073	12147	401	181	33.01	14.90	1.72	1148	0.98	1.81	90	Yes	31	34.4	278	1
Stockton	J. W. Blandford, L.R.C.P.	34539	19081	474	233	24.84	12.47	2.04	192	0.41	2.04	97	Yes	34	35.0	1	12
Sunderland	Robert Stobo, M.B., B.Hy.	6980	30129	1012	396	38.58	13.14	1.36	117	0.69	2.29	258	Yes	89	34.4	17	34
Weardale (Derwent Division)	Andrew Veitch, M.D.	13144	460	12	9	26.08	19.56	nil	nil	nil	2.17	1	No*	nil	..	..	..
Weardale (Stanhope Division)	James Bannerman, M.R.	24864	2615	72	43	27.53	16.44	0.76	14	1.52	2.29	13		nil	..	..	6
Weardale (St. John's Division)	John Easton, L.R.C.P.	36096	3186	68	63	21.34	19.77	1.57	102	1.57	1.25	12		nil	..	..	2
Weardale (Wolsingham Div.)	R. H. O. Garbutt, L.R.C.P.	21552	3600	82	40	22.77	11.11	nil	85	0.55	1.94	70		nil	..	..	..

* This district has hospital accommodation for small-pox cases only.
in the adjoining urban district.

† These statistics exclude the newly created Chester-le-Street urban district.

‡ In these districts arrangements have been made by which fever patients may be removed to the hospital
|| This rate excludes the deaths under 1 year of age and the births registered in the workhouse.

TABLE C.

Tabulated Statement of the chief Vital Statistics of the Administrative County of Durham for the year 1909, compiled from the monthly returns supplied to the County Medical Officer by the Registrars.

1909.

	Population (Estimated 1909).	Births.	Deaths.	Zymotic Deaths.	Per 1,000 Population.					Deaths under 1 year per 1000 Births.	Percentage of Uncertified Deaths to Total Deaths.
					Birth- rate.	Death- rate.	Zymotic Death- rate.	Phthisis Death- rate.	Bronchitis Pneum'nia & Pleurisy Death-rate.		
Boroughs ...	173,881	5,030	2,680	207	28·1	14·9	1·15	0·93	2·55	119	3·5
Other Urban Districts	325,940	11,774	5,017	536	36·1	15·3	1·64	0·97	2·27	120	4·3
Rural Districts ...	349,979	13,606	5,725	640	38·8	16·3	1·82	0·84	2·41	129	3·0
Administrative County	854,800	30,410	13,422	1,383	35·5	15·7	1·61	0·91	2·38	124	3·5
England and Wales ...	35,756,615	914,017	517,782	40,008	25·6	14·5	1·12	—	—	109	1·3



INSPECTORS' REPORTS—URBAN

* For six months only.

TABLE D1.

INSPECTORS' REPORTS—RURAL.

RURAL DISTRICTS.		PUBLIC HEALTH ACTS—NOTICES SERVED AND NUISANCES ABATED.																				Samples of Water taken for Analysis.	Samples of Water condemned as unfit for use.	Seizures of Unwholesome Food.	Convictions for Exposing or Selling Unwholesome Food.	Lots of Infected Bedding stored or Destroyed.	Houses Disinfected after Infection Disease.	Schools Disinfected after Infection Disease.	Prosecutions for Exposure of Infected Persons or Things.	Convictions for Exposure of Infected Persons or Things.				
		Food Conditions.	DWELLING-HOUSES AND SCHOOLS.		Lodgings-houses.	Dairies and Milk-shops.	Cowsheds.	Bakchouses.	Slaughter-Houses.	Ashpits and Privies.	Deposits of Refuse and Manure.	Water Closets.	Defective Yard Paving.	Defective Traps.	HOUSE DRAINAGE.				Water Supply.	Piggies.	Animals Improperly kept.										Offensive Trades.	Smoke Nuisances.	Other Nuisances.	TOTALS.
			Structural Defects.	Over-crowding.											No Disconnection from Sewers.	Other Faults.																		
AUCKLAND—	Population, 60,505	31	802	8	..	..	15	..	..	112	63	5	143	7	3	135	28	11	..	..	..	4	897	1	1	1	..	360	360	..	..	
Inspectors of Nuisances—	J. Liddle and J. D. Dowson	4	59	2	..	..	3	..	..	35	203	5	61	..	..	14	..	..	..	..	..	1	447	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		33	304	10	..	..	12	..	..	148	326	4	177	7	3	134	26	11	..	..	..	5	1200	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
BARNARD CASTLE—	Population, 11,974	1	19	2	1	..	2	17	47	2	4	1	..	34	24	1	6	161	1	9	17	2		
Inspectors of Nuisances—	Robert Brown	..	1	..	..	..	..	..	..	3	..	..	..	..	..	1	51	..	..	..	..	..	56	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		1	20	2	..	..	1	..	2	26	44	2	4	2	..	36	72	1	..	..	..	6	219	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
CHESTER-LE-STREET—	Population, 62,739	23	483	45	2	2	31	1	..	685	53	25	141	23	1	239	35	3	25	..	..	83	1905	..	..	..	..	..	..	..	..
Inspectors of Nuisances—	G. B. Brown, R. J. Swaddlo, and J. E. Harrison	1	15	5	..	..	..	..	..	9	2	2	2	..	..	2	5	..	1	..	..	2	46	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		34	364	23	2	4	36	1	..	631	61	36	153	23	1	269	49	7	14	..	..	66	1774	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DARLINGTON—	Population, 9,591	1	5	1	..	9	12	..	3	24	1	1	14	3	..	77	25	2	1	179	7	7	12	23	10		
Inspectors of Nuisances—	William Pallister	..	..	1	..	..	..	..	..	..	..	..	..	3	..	3	9	..	..	..	..	..	12	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		1	3	1	..	7	10	..	3	13	1	1	11	3	..	74	14	..	..	..	..	..	142	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DURHAM—	Population, 29,301	10	27	9	..	20	20	..	14	81	10	..	103	8	..	6	7	315	8	153	153		
Inspectors of Nuisances—	James Menzies	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		10	27	9	..	20	20	..	14	70	10	..	103	..	..	..	8	..	6	..	..	7	304	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
EASINGTON—	Population, 56,922	19	14	2	5	48	15	74	5	2	9	12	7	19	4	7	6	17	265	2	1	5	39		
Inspectors of Nuisances—	William Emery	2	2	2	1	1	..	..	283	..	..	..	..	..	..	28	7	..	..	..	..	326	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		21	16	4	6	46	..	..	15	220	5	2	9	12	7	19	11	7	6	..	..	17	423	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
HARTLEPOOL—	Population, 2,355	3	1	5	..	4	..	1	14	4	1	13	2		
Inspectors of Nuisances—	W. Burton	..	..	..	..	..	1	..	..	7	..	..	1	..	..	..	1	..	..	..	..	10	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		..	..	..	..	..	3	..	..	7	..	..	1	5	..	4	1	1	..	..	..	22	..	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
HOUGHTON—	Population, 23,700	5	24	3	..	2	57	4	2	12	73	23	2	2	17	226	9	8	19	33	2		
Inspectors of Nuisances—	W. Morley	1	6	..	..	..	..	..	23	..	..	..	..	..	..	..	1	..	..	..	..	3	39	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		5	23	3	..	2	..	..	69	4	2	12	..	..	..	71	23	2	2	..	..	19	237	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
LANCHESTER—	Population, 32,109	2	243	21	..	25	..	13	193	15	..	248	1	1	100	20	269	1151	2	2	3		
Inspectors of Nuisances—	J. R. Lupton & G. W. Westgarth	..	15	17	..	5	..	..	36	..	..	..	..	..	..	10	3	..	..	..	..	122	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		2	223	6	..	22	..	13	181	15	..	238	1	1	99	4	..	..	..	..	269	1074	..	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SEDGEFIELD—	Population, 31,875	..	2	3	9	..	139	..	3	116	7	2	10	77	2	1	112	483	1	1	13	55		
Inspectors of Nuisances—	J. Stones and G. S. Thompson	..	..	3	..	1	..	..	20	..	..	2	..	..	..	17	2	..	..	..	..	1	46	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		..	2	6	9	..	139	..	3	124	7	2	12	..	..	94	2	1	..	..	..	112	513	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOUTH SHIELDS—	Population, 12,147	17	9	7	..	11	..	7	44	6	8	5	3	3	4	3	2	1	..	..	4	134	..	..	..	..	23	59	..	..	..
Inspectors of Nuisances—	William Welsh	2	5	..	..	10	..	1	21	2	4	3	2	..	..	3	3	..	..	..	1	57	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		18	10	6	..	16	..	7	44	6	8	7	4	3	6	..	2	1	..	..	4	142	..	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
STOCKTON—	Population, 19,081	8	54	2	..	9	21	2	3	71	3	4	18	12	..	106	6	..	7	1	..	19	346	6	2	96	6		
Inspectors of Nuisances—	J. Franklin	..	..	1	..	..	1	..	1	5	3	..	3	..	..	3	..	1	1	..	..	19	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		8	50	3	..	9	20	2	4	74	6	4	21	12	..	109	6	1	8	1	..	19	357	..	..	..	..	..	..	..	..
Nuisances abated after Notice..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SUNDERLAND—	Population, 30,129	8	59	2	..	4	5	3	1	47	8	1	15	7	4	38	4	4	1	..	4	56	271	2	..	98	265	2		
Inspectors of Nuisances—	Ernest Hitchen	4	..	8	..	1	33	..	209	3	1	2	1	2	1	7	..	..	..	..	..	270	..	..	..	..	..	..	..	..	..
Formal Notices by Order of Authority		12	57	10	..	5	19	3	..																									

